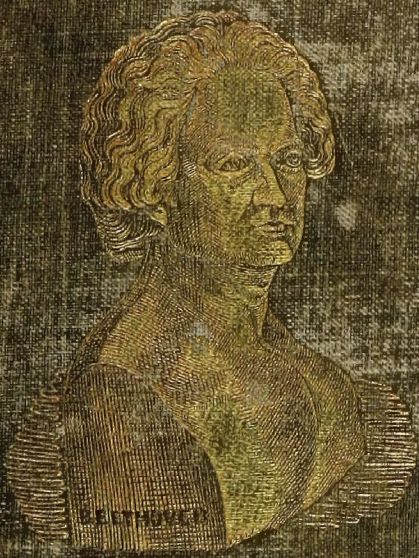
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THEORY AND PRACTICE

OF

MUSICAL COMPOSITION.

BY

ADOLPH BERNHARD MARX,

DOCTOR OF MUSIC, MUSICAL DIRECTOR OF THE UNIVERSITY OF BERLIN, ETC.

TRANSLATED FROM THE THIRD GERMAN EDITION,

AND EDITED BY

HERRMAN S. SARONI.

FIFTH AMERICAN EDITION,

WITH AN APPENDIX AND NOTES,

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PUBLISHERS' ADVERTISEMENT.

A. B. Marx holds such high rank in Germany as a writer upon the subject of Musical Composition, that any recommendation of his great work to those who are at all acquainted with the musical literature of the land which is emphatically the home of music, would be superfluous. It is without a rival as a treatise upon this subject, thoroughly scientific, and yet adapted to popular comprehension. A work of this character in the English language has been so much sought after in vain, as to lead to the present translation, which embraces two books, viz.:—

Book I. The Elements of Musical Composition.

Book II. The Accompaniment of a given Melody; with especial reference to Chorals and People's Songs. (Volkslied.)

The translation has been made from the third improved German edition, and great care has been taken to follow the original as closely as possible, securing, at the same time, the necessary adaptation to the American student,—and an Introduction has been prepared by the Editor.

Extract of a Letter received from DR. A. B. MARX, *by the Publishers.*

BERLIN, June 23, 1852.

GENTLEMEN,

Your polite communication, and the copy of a translation of my work on MUSICAL COMPOSITION, have been received through Messrs. Edwards, Sandford, & Co., for which accept my warmest thanks.

* * * * *

I find that your translator (as far as I am able to judge from a somewhat imperfect acquaintance with the English language) has done his work very *practically* and *successfully;* and I beg you to express to him, as also to the eminent men who have honored my work with their approval, my sincerest thanks, and also yourselves to accept the same, for the very elegant style of the edition.

* * * * *

AUTHOR'S PREFACE.

THE true problem of a treatise on Art may be thus expressed:

That it should transmute the most thorough and comprehensive knowledge of Art into the consciousness and sensibilities of the pupil, and immediately incite him to artistic activity.

Neither abstract knowledge nor technical instruction can ever secure artistic culture, or even prepare the way for it; both are opposed to the essence of Art; and it is the fault of the old teachers, as I have elsewhere proved, that they have not risen above this unartistic tendency, or been willing to depart from it. As the achievement of the artist, born of his own free, truth-pervaded mind, is not an abstract thought, but an embodied spirit, united in as intimate and inseparable a unity as the soul and body of man, so must the science of Art continually strive after the most living and impressive truths, from which it should lead the way to bolder and more joyous achievements. Both, however, should be accompanied with that certainty, reposing on the convictions of experience, and that ardent desire for new achievements and progress, which, in my opinion, are the conditions and characteristics of a true artistic life.

This principle, in connection with contemplation on the essence of Art, matured by observation and artistic activity from an early period of youth, strengthened by a view of the historical development of art, and by the growing approbation of the most intelligent and continually enlarging experience,—this principle, as in my first and second treatises, is still my law. That the inter-

change of theory and practice, of law and liberty, of form and essence, of melody and harmony—still, as formerly, called contraries, though in reality united,—may become more living, animated, and fertile of results, was my principal aim in the present work. In this view, notwithstanding the gap in the formal, or rather merely nominal separation of the Elements from their accompaniments, I consider it an essential improvement to have placed the further development of *passes* and *harmonic figuration* after the choral, where they are immediately applied, for the freer and more copious treatment of the secular melodies, and not before it, where they are not needed. This, however, and all further improvements are to be tested by the intelligence of the professor, and the experience of teachers and pupils.

I would gladly offer to younger teachers, or to such as have not yet had opportunity for extensive experience, an intimation of my method of teaching; certainly not with the presumption of being able to say any thing new or important, but, as a duty, unassumingly to impart what I have to others. Precisely here, however, is the insufficiency of all writing to supply the place of immediate intuition most strongly felt. Not books, but life, educates; and only when life is quickened and wrought on by life, can books perform their mightiest and most beneficent office, namely, to unite the experience and intelligence of many lives; to give support and a rallying-point, so that every isolated existence —always most limited in its immediate activity in relation to the whole—may not forever perish; that every worker, unadvised and unquestioned by the mute Past and Present, may not be forced either to begin his task anew, or follow in the gloomy path of transmitted usage, in order to be not wholly without support. Often and long enough has the want of this reciprocal action of doctrine and life in our artistic science made itself most painfully felt. Even in our own times have we been obliged to see teachers attempting with words and books to form artists or connoisseurs, while their own examples proved them to be wanting in the least skill for composition; and, on the other hand, there are able composers who venture to neglect, if not to treat with dis-

dain, every pedagogic, psychological, or other assistance, even to explain the science of their own skill in execution. The former are easily recognized by their deficiency; not so the latter. The prejudice is only too widely diffused, that an able or even a distinguished composer, must of necessity, and without further pains, be also an able teacher; while yet the indispensableness of further qualifications in a teacher is so easily seen, that pedagogic science long since offered to explain, and experience has often proved, (as in the cases of W. A. Mozart and L. V. Beethoven,) that artistic ability and the capacity to teach are not so often or so necessarily united, that the one may be safely inferred from the greatness of the other. The teacher should, indeed, possess the cultivation, the spirit, and the soul of an artist,—should be himself an artist,—but, besides this, he should not be wanting in the full vocation, the dexterity, the experience, and the capacity of the pedagogue. Seldom as this many-sided fitness is either found or attained, reflection will not fail to make us confess its necessity.

My method of teaching, both in theory and practice, has from the first been directed in conformity with these views. Of pure verbal instruction only so much is at first premised as is necessary to acquaint the scholar with the method of instruction, and direct him to the point of artistic effort. From the first series of notes, (the major diatonic scale,) the instruction assumes its peculiar and permanent character. While the scholar who is familiar with his teacher, perceives what to observe and what to miss in the form of the tune, the more able and diligent scholars—thus prepared among the less gifted—will almost of themselves grasp the next necessary, or next possible point, or understand it without difficulty from the course of lectures. The scholar is thus kept from the beginning in artistic activity,—in the atmosphere of his future life. The teacher also remains fresh and active, and has no longer cause, either in his work or his meditations, to fear the old disheartening dissension between Art and Science.

With single scholars, or even with two or more, who sit at the teacher's side, and watch the movements of his pen, or who often

unexpectedly take the pen into their own hands,—to whom the teacher must give advice, or instruct them how to proceed with a work already begun; how to explain, to improve, or to avoid such and such a dubious point,—for all these purposes this system of instruction has been proved most agreeable and fertile of results. The more the scholar can anticipate the teacher,—the sooner he is able of himself to discover an explanation or an expedient—to accelerate his progress—the more successful, in my opinion, is the teacher's work. The mistakes of the scholar, especially in the greater tasks of the fugue and sonata forms, provided they have but one tenable position, may be taken up and corrected at leisure, thus enabling him at once to perceive the discrepancy of his error with some part of his work. In artistic science, where individuality and its subjective sensation and volition give the last decision in the moment of artistic creation, I do not hold it advisable that the scholar should wholly avoid errors. He should be thoroughly tried and tested, and have opportunity to conquer himself by his own might. A vanquished error is a progress; an error merely suppressed threatens a return.

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ELEMENTS OF MUSICAL NOTATION.

BY THE

TRANSLATOR.

PREFACE TO THE ELEMENTARY PART.

The indefiniteness of the English language, in everything concerning Music, makes it a task of extreme difficulty to write an Elementary Treatise, corresponding to a theoretical work of any foreign, and particularly German author. The German musicians have made Music so thorough a study, that it is absolutely impossible to do them justice in translating their works with general terms, which at every step are subject to modifications and contradictions.

It is this consideration which has induced the Translator of this work to prepare the student by an Elementary Treatise, the chief object of which is to give exact definitions of such terms as may occur in this or other works of the same author, and the exact meaning of which it is absolutely necessary for the student to know.

In order to avoid the introduction of indefinite terms, or arguments upon them, as much as possible, the Translator has thought it best to convey the necessary information in regular didactic form; and if comparisons and arguments cannot be absolutely avoided, they will be made at least as brief as possible.

INTRODUCTION.

"Music is the art of combining sounds agreeable to the ear," is the general definition given of the word.

Not every sound, however agreeable to the ear, is a musical sound; nor is a combination of such sounds always Music. It follows, then, that our first task must be to distinguish musical sounds, or sounds agreeable to the ear, from such sounds as constitute Music.

We know that the ear is the organ which is most directly affected by Music. Every vibration of air caused by a collision of bodies, or other means, sufficient to affect the ear, we designate by the general name of

SOUND.

We know, also, that Music is produced by the human voice, as well as by instruments of various kinds—Flutes, Trumpets, Violins, &c. These instruments distinguish themselves from each other by the quality of their sounds.

Finally, we perceive on one and the same instrument, that the sounds produced upon it vary in regard to pitch. Thus, for instance, are the sounds produced on the shorter strings of a Harp more acute than those produced on a longer string. When we consider a sound in this respect, we must call it

TONE.

We have, therefore, many different tones. The tones of the longer or thicker strings are called *low ;* those of the shorter or thinner strings are called *high.* Thus of human voices, we say that the tones of a man's voice, *in general,* are lower than those of a boy's or girl's voice ; the tones of the Flute, Violin, Trumpet, we say, are higher than those of the Bassoon, Double-bass, and Horn. We say " in general ;" for since every voice and every instrument can produce many tones, it can occur that the highest tones of a man's voice, for instance, are higher than the lowest tones of a girl's voice, &c.

Every tone or sound to be produced, must be produced within a certain time, therefore must fill a certain space of time,—a longer or shorter space, definite or indefinite. This time, or space of time, accorded to a tone or sound, is called its

DURATION.

We say, therefore, of a tone : it has a definite or indefinite duration.

If we cause the gradual production of a series of tones or sounds of certain duration, according to some regulating law, in any fixed and continued, *i.e.* repeated, time-moments, we call this regulation of time-succession,

RHYTHM.

Where such regulation does not take place, the tones have either no certain duration, or follow in no regular succession ; we say that such tone-succession is *unrhythmical.*

A succession of tones, which is formed according to any

particular plan, and at the same time rhythmically regulated, (whether agreeably, expressively, &c., or not,) is called a

MELODY.*

A piece of Music can consist of a single tone-series,—it is then called

Monophonic, (for one voice.)

Or it can consist of two, three, four, or more, simultaneously progressing tone-series; it is then called

Duophonic (for two voices); *Triphonic* (for three voices); *Tetraphonic* (for four voices); or *Polyphonic* (for many voices.)

Each series of tones, however, whether sung or produced upon some instrument, is called a

VOICE.

The simultaneously-meeting tones of different voices must stand to each other in some reasonable, corresponding relation. This relation is called

HARMONY.

And of all these essentials: tones and sounds, tone-succession and rhythm, melody and harmony, does

MUSIC

consist.

* A more concise definition of Melody will be given at a later period.

FIRST PART.

TONES AND NOTES.

CHAPTER I.

THE TONE SYSTEM.

Tone is a sound of certain height or depth, (pitch.)

We know already that there are many tones; the mass of the various tone-gradations is absolutely innumerable. In Music, however, not all these tone-gradations are made use of. A part merely of these tones are actually and fixedly employed. These tones constitute what is called the

TONE SYSTEM.

This tone-system contains above one hundred tones. It would have occasioned much difficulty to fix a particular name for each of them; and this has been the cause of the classification of these tones under seven

DEGREES.

These degrees have been named

C—D—E—F—G—A—B.

And all tones have one of these names, or one derived from them.

CHAPTER II.

THE NOTE SYSTEM.

For the designation of tones, we make use of a series of characters, called

NOTES.

It would be tedious for us to enter into the history of Musical Notation. We must content ourselves with communicating the facts, that after many changes and modifications, five lines have been fixed upon, on which, or between which, the tones are indicated by open or filled circles, or ovals, according to their pitch and duration.

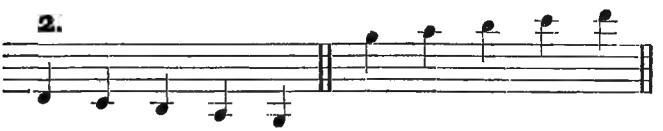
1.

Where these five lines are not sufficient, additional lines, called

LEGER LINES

are introduced, which, not being continuous, are easily distinguished from the lines of the stave. Here

2.



we have introduced the leger lines, in order to designate

those high or low tones, which are above the highest or the lowest tones capable of being designated within the stave.

We might now read and write all notes, if we only knew what meaning to attach to any particular note. In other words, we must fix upon some point, or some note corresponding to a certain tone, by which we can be guided in the designation of the others.

For this purpose we have certain characters, called

CLEFS,

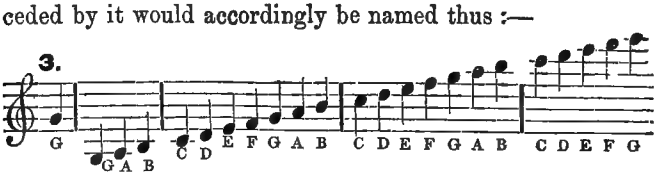
which indicate the tone represented by them. Of such clefs there are three in use :—

The *G*-clef, or Treble-clef ;
The *C*-clef, and
The *F*-clef, or Bass-clef.

1.—THE G-CLEF

has this form,

and indicates that upon the line inclosed by its lower circle, the tone *g*, (the lowest *g* of the Oboe, or the fourth *g* of a six-octave Piano-forte, counting from the left to the right,) shall be represented. French composers of former times, placed this clef upon the first line of the stave, thus making it imperative to consider the note upon it as the representative of the tone *g*. At present the *G*-clef is invariably placed upon the second line of the stave, and the notes preceded by it would accordingly be named thus :—



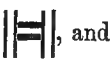
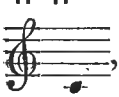
By means of additional leger-lines, we might designate many additional tones upon this stave; but since the reading of such notes would be a very troublesome task, another character has been invented, in the shape of a wave, or dotted line:—

8 ~~~~~~~~~~~~~~~~~~~~ va, or 8 ..... va

which, with the figure 8 before it, and the va succeeding it, indicates that the passage thus marked is to be played or sung an octave higher than it is written.

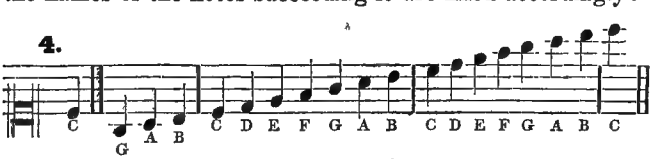
The leger lines below the stave can be avoided, if necessary, by substituting another clef. More of this, however, anon.

2.—THE C-CLEF.

Its most usual form is this  , and its use is a threefold one. Indicating the tone  , it is used—

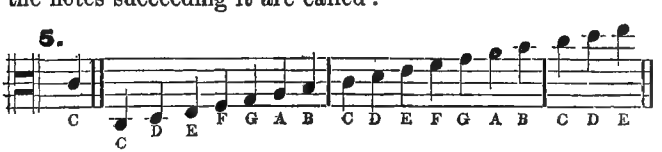
A, as Soprano-clef;

in which case it is placed upon the first line of the stave, and the names of the notes succeeding it are fixed accordingly:



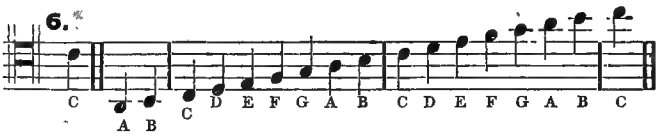
B, as Alto-clef.

As such it is placed upon the third line of the stave, and the notes succeeding it are called:—



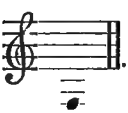
C, as Tenor-clef.

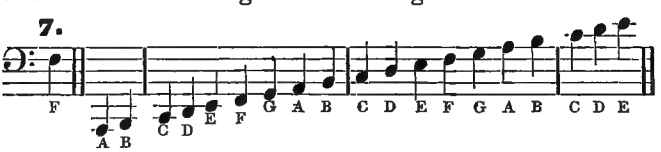
As such it is placed upon the fourth line of the stave, and the notes succeeding it are called :—



It is hardly necessary to add, that additional leger-lines can be employed in the *C*-clef, as well as in the *G* or *F*-clef.

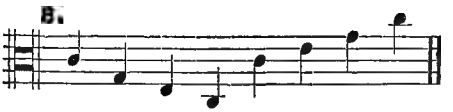
3.—THE F-CLEF.

It has generally this , or some other similar form, and indicates the tone *f*  . It is now placed exclusively upon the fourth line of the stave, and thus gives to the notes succeeding it the following names :—



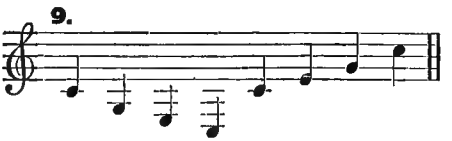
The attentive student will have divined, ere this, what these different clefs are used for. Bass and Treble clefs even are not sufficiently convenient for all tone-series and voices. The *F*-clef, for instance, would be too low for a Tenor or Alto voice, while the Treble, or *G*-clef, would be just as much too high. The former would require, at least, four leger-lines above the stave, and the latter just as many below the stave. How much more convenient in this respect is the Alto and the Tenor clef :—

8.



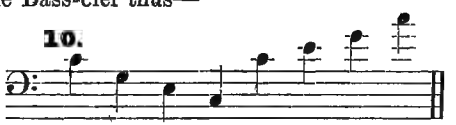
The above passage, if written in the Treble-clef, would appear thus—

9.



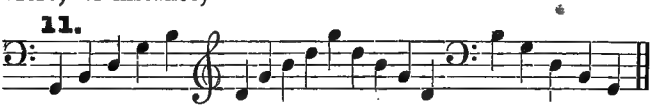
and in the Bass-clef thus—

10.



These different clefs are also used in passages of extensive compass, for which a single clef would not be sufficient. Here, for instance,

11.



is a passage, which, by means of changing the clefs, has been made readable; while the use of a single clef would have made it almost unintelligible.

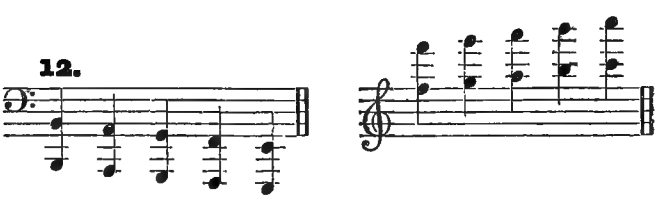
When several voices combine in one composition, they are written upon separate, parallel staves, and each voice is preceded by its proper clef; for instance, the *G*-clef for the higher voices, the *F*-clef for the lower ones. In such case each clef is valid until replaced by another.

CHAPTER III.

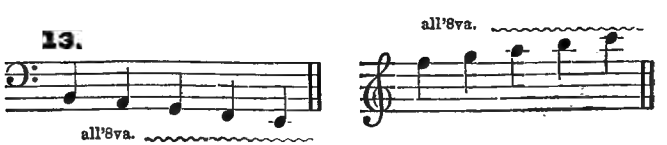
ABBREVIATIONS AND OTHER ACCIDENTAL CHARACTERS IN MUSIC.

We have already mentioned the character which transposes a tone-series to the octave above. The same character is used for the transposition of a passage into a lower octave. In such case the wave-line is placed *below* the notes to be transposed. For single notes the figure 8 will be sufficient.

A similar facilitation consists in employing the words *all'-ottava*, or *all'*8va, which, if placed above the notes, indicates that the higher octave is to be added to the notes thus marked; if placed below the notes, the lower octave is intended. Thus the following passages.



might be expressed in this manner:—



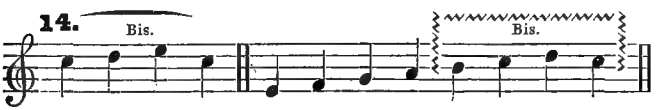
Other abbreviations, like *alla* 3*za* (*ter*$^{za}_{=}$), *alla* 6$^{ta}_{=}$ (*sista*), &c., will need no further explanation.

Finally, there are certain characters intended to save the notation of a passage partly.

If a passage is to be repeated two, three, or four times, it is written but once, and the words—

bis,—ter,—quater,

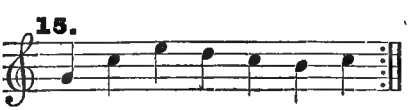
are placed above it. In addition to the above, the passages to be repeated are often inclosed by curves, or dots :—



If a more extensive passage, or perhaps a distinct part of a composition, is to be repeated, THE REPEAT, consisting of two perpendicular lines, with dots on one or both sides, is made use of :—

If the dots are placed on both sides, the repeat refers to the part just played, as well as to the succeeding part, which latter must be terminated by another repeat with dots on one side.

If a part is to be repeated from the beginning of a composition, a repeat with dots on one side only is necessary :—



If a passage is to be repeated, the end of which experiences an alteration in its repeat, the part to be altered is enclosed by a curve, and the words 1ma (prima volta), are placed above it. In the repetition of such part, the passage marked 1ma is omitted, and the player has to pass on beyond the repeat, where the words 2da (seconda), should be placed to guide him. The words *prima volta*, and *seconda volta*, stand here for 1st and 2d time, and thus explain the mystery.

The words *Da capo*, (*D. C.*, or *D. c.*, or *d. c.*,) have a similar meaning,—*i. e.*, "to repeat."

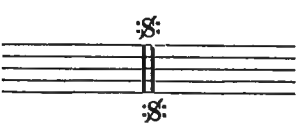
If the repetition goes merely to a certain point, where the piece is to be ended, the point is marked by the word—

FINE, (end,)

and for the sake of clearness a pause:

is placed above the end note; and instead of the simple *D. C.*, the words *D. C. al fine* (from the commencement to the end), are placed at the point where the repetition is to take place.

If the repetition is to begin at a certain point in the middle of the piece, that point is marked thus:



and instead of *d. c.*, the words *d. s.*, (dal segno,) from the sign, are used.

There are in use still more characters of abbreviation and facilitation, we might say, but these not being absolutely necessary for our immediate purpose, we shall give their meaning when they occur.

CHAPTER IV.

ELEVATION AND DEPRESSION.

When we compare our notes and tones, as far as we know them at present, with the key-board of a Piano-forte, we find that we do not know yet all the tones of our system, and that consequently we cannot represent them by notes. We have reference to the upper keys, or black keys of the Piano-forte. We have permitted this temporary incompleteness, in order to obtain a basis from which we can easily arrive at the wanting tones and characters.

Our tones, thus far, if succeeding each other in regular rotation, are by no means equidistant from each other. Beginning from *c*, for instance, we arrive at the next tone *d*; between the two, however, there is room for another tone. The same relation exists between *d* and *e*, *f* and *g*, *g* and *a*, *a* and *b*.

A diagram of these relations will aid us materially in achieving our object. We have here accidentally mentioned *c* as the first tone; and on examination the series from *c* to its octave, will be found so satisfactory to the ear, that we shall adopt it at once as the normal tone-series for our analysis, being, in addition to the above, the *only one* of the seven tone-series at present within our reach, which is completely satisfactory. Here, then, is a diagram in which the possible intermediate tones are marked by a mere dot, for

the simple reason that, at present, we have no other means of designating them :

$$C\text{—}d\text{—}e\ f\text{—}g\text{—}a\text{—}b\ c$$

We repeat, again, that this succession of tones is perfectly satisfactory to the ear; and since we ascend, as it were, from one *c* to the other, we will call the whole diagram a ladder, or to use a technical expression derived from the Latin word for "Ladder," (*scala*,) we will call it

A SCALE.

Having once adopted the term "scale," it is but natural that we should call the intermediate tones

DEGREES,

and the distances from tone to tone, or from degree to degree,

STEPS.

When we now compare the different steps, we find that those admitting of an intermediate tone are larger, must be larger, than those which do not admit of an intermediate tone. We will distinguish these different species of steps by the terms "whole steps," or "steps," and "half steps."

We find, further, that our scale contains five steps, and two half steps, distributed in such a manner, that from the first to the second, from the second to the third, from the fourth to the fifth, from the fifth to the sixth, and from the sixth to the seventh degree, are steps; and from the third to the fourth, and from the seventh to the eighth degree, are half steps, as in the following diagram :

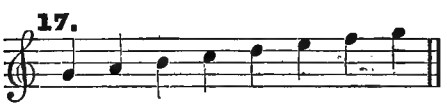
$$16,\ c\overset{1}{\text{—}}d\overset{1}{\text{—}}e\overset{\frac{1}{2}}{\text{—}}f\overset{1}{\text{—}}g\overset{1}{\text{—}}a\overset{1}{\text{—}}b\overset{\frac{1}{2}}{\text{—}}c.$$

We stated in a former paragraph that our taking *c* as the basis of a scale, was merely accidental. We will remember that a succession of tones, in order to be a scale, must be a *regular* succession, in which the steps and half steps are distributed according to the above diagram. And now we will attempt to form a scale from any other tone.

We take *g*, which the student may again consider merely accidental; the reason, whereof, however, will soon become apparent to him. The *regular* succession is attended to when we take the degrees, as they follow from *g* to *g*, thus:

g—*a*, *b*, *c*, *d*, *e*, *f*, *g*; or thus,

17.



but on striking these notes on the Piano, and comparing them with our last diagram (No. 16), we soon discover that the steps from the sixth to the seventh, and from the seventh to the eighth degree, are different from our diagram. The *e* and *g* are correct, but the *f* is not what we want. Yet the *f* degree is necessary to make our scale complete.

And now we return to those intermediate tones, for which we could find no name. There is the very tone we need between the *f* and *g*. The *f* degree being absolutely indispensable, we place this new tone upon it; and in order to distinguish it from the original *f*, we place this mark—

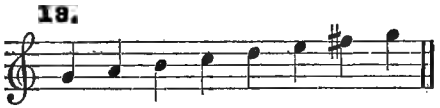
♯

before it. This character is called a "sharp," and conveys the idea, that the tone before the representative of which it

is placed, has been made more acute, elevated—*sharpened*, as it were.

The scale of *G*, with this amendment, would present the following appearance:

18.



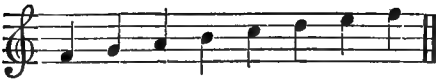
It is now a correct scale in every particular, differing from the scale of *C* in but one point, that of pitch.

It is time now to give the reasons for taking the tone *g* to experiment upon. The student will perceive that one tone only required an alteration. *G* was the fifth tone of our original scale, and in taking again the fifth tone of our new scale, *d*, one more sharp will be all that is requisite to make the scale of *D* correspond with that of *G*. Thus the student may pursue his course, adding sharp to sharp, while we begin at a different point, probably to meet him at some point where we can explain his doubts, or remove his indecision. We have simply to add, that in the course of his labors, if he pursues the plan we indicated,—*i. e.*, always resuming his task from the *fifth* tone of the *last* scale, he will soon discover tones which are not in our original scale; but in following the above directions, he cannot fail in completing his scale.

We have succeeded so well in constructing a scale upon *g*, the fifth tone *above c*, that we are warranted by it, at least, in attempting the formation of a scale upon *f*, the fifth tone *below c*.

Let us again write our degrees in regular succession, beginning with *f*.

19.



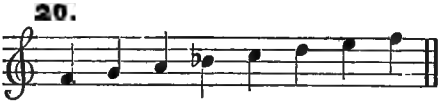
Comparing the steps of this tone-succession with our diagram No. 16, we find that while in the scale of *G*, it was the seventh tone which required being replaced by another, it is now the fourth tone which demands a modification. We bear again in mind, that we must preserve the regular succession of the degrees, and *b* being too high, we have recourse to the intermediate tone below it, and in order to distinguish it from the original *b*, we place a

♭

before it. This character is called a "flat," and conveys the idea, that the tone before the representative of which it is placed has been lowered, depressed—*flattened*, as it were.

With it the scale of *F* would present the following appearance :

20.



The elevated tones have the word "*sharp*" affixed to them, as *f* sharp, *g* sharp, &c.

The depressed tones have the name "*flat*" affixed to them, as *b* flat, *a* flat, &c.

Taking fifth *above* fifth tone to construct our scales upon, would give us the scales of

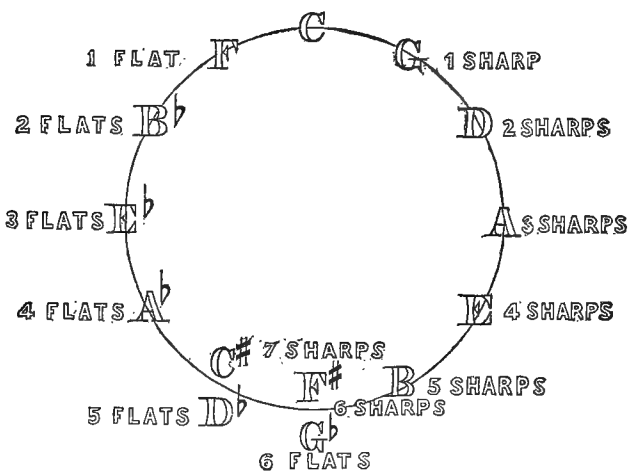
C, *G*, *D*, *A*, *E*, *B*, *F*♯, *C*♯, &c.

Taking fifth *below* fifth, would give us the scales of

C, *F*, *B*♭, *E*♭, *A*♭, *D*♭, *G*♭.

That some of these scales should be alike in sound, yet different in appearance, need not trouble us. Enough that we know when to use the one or the other, and enough to remember that we issued from the same point in two different directions, and that our impulse has carried us over ground previously gone over from the other point.

21.



In order to avoid the unnecessary accumulation of characters in the notation of a piece of music, the sharps or flats incident to the scale or key in which a composition has been written, are merely placed at the beginning of the piece, or at the beginning of each stave, and are called the signature of a scale or key. This signature is valid until it is recalled by certain characters, (of which we shall speak directly,) or until another signature occurs. During the course of a piece of music, we have then to remember how many sharps or flats its key requires, and what tones have been thus modified.

The fact of there being in existence *incidental* flats and sharps, leads us to suppose that there are also *accidental* flats and sharps. These occur in almost every piece of music, and arise when the composer leaves the key in which the piece is written, either temporarily or permanently, without changing the signature, or when a tone of a foreign scale is introduced without affecting the regular key. In such case the sharp or flat is always placed before the tone, and holds good until it is recalled—*i. e.*, until the modified tone is replaced by the original one, or until the end of the measure in which the accidental occurs. The character used for neutralizing a sharp or flat is called a "*natural*," and has this form:

♮

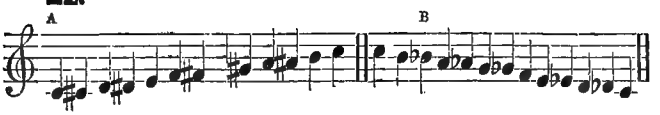
It is placed before the note to be neutralized, and holds good to the end of the measure* in which it occurs.

There are also instances in which the incident elevation or depression of a tone is not sufficient to reach the desired point of pitch. Double sharps (×) and double flats, (♭♭,) have been introduced in such cases. The former elevates the tone an additional half step, the latter depresses it in the same ratio. We need hardly mention that a double natural (♮♮) is required to neutralize the effect of either.

If the intermediate tones of which we have spoken, can occur in the course of a composition, they can also occur in a scale. Here

* The word measure signifies a musical division marked by perpendicular lines, called "bars." More of this in the chapter on Rhythm.

22.



is the scale of *C*, with all its intermediate tones. We have written the ascending scale with sharps, and the descending scale with flats, in order to avoid the introduction of naturals. A better reason for it, however, will be given in the "Theory of Music."

A scale, in which the intermediate tones are introduced, is called a

Chromatic Scale.

In contradistinction to it the original scale is called the

Diatonic Scale.

Tones which differ in name but not in sound, like *b* and *c*♭, *c*♯ and *d*♭, *e*♯ and *f*, &c., are called

Enharmonic.

More of this hereafter.

CHAPTER V.

THE MEASURING OF TONE-RELATIONS.

SINCE Music is a combination of tones, it is necessary to know the relations of these tones to each other.

We can designate it superficially, by merely stating that one tone is higher than another, for instance, *g* or *a* is higher than the *d* of the same octave. But since under and above each tone there are many lower and higher ones, this statement is by no means as exact as we should desire it.

Counting the degrees would be already much more exact. Beginning from any one which we call *the first degree*, we call the next above it the second, third, &c. Frequently the Latin numerals are used for this purpose; and since they will occur even in our work, we will give both the Latin and English names. There are then—

The first degree,	or	First,	or *Prima.*
The second	—	" Second,	or *Secunda.*
The third,	—	" Third,	or *Tertia.*
The fourth,	—	" Fourth,	or *Quarta.*
The fifth,	—	" Fifth,	or *Quinta.*
The sixth,	—	" Sixth,	or *Sexta.*
The seventh,	—	" Seventh,	or *Septima.*

And in some instances it is necessary to go even further. Thus we have—

The eighth	degree,	or Octave,	or *Octava.*
The ninth	degree,	" Ninth,	or *Nona.*
The tenth	degree,	" Tenth,	or *Decima.*
The eleventh	degree,	" Eleventh,	or *Undecima.*
The twelfth	degree,	" Twelfth,	or *Duodecima.*
The thirteenth	degree,	" Thirteenth,	or *Decima tertia.*
The fourteenth	degree,	" Fourteenth,	or *Decima quarta.*

We perceive at once that Octave, Ninth, Tenth, &c., are nothing but the first, second, third, and fourth degree, in a higher octave. Yet, at a later period, we shall discover that there is a difference, sometimes, between these degrees.

When we now compare two tones in regard to their respective pitch, we place them in a relation to each other. This relation is called—

INTERVAL.

We say, therefore, *C* and *D* form together the interval of a second, *G* and *D* the interval of a fifth, &c.

But even this designation is not sufficiently exact, for we know that each of our degrees embraces *five* different tones. Which of those five is now in reality intended? If we demand, for instance, the fifth of *C*, it may be *g*, or $g^{\sharp}$, or $g^{\times}$, or $g^{\flat}$, or $g^{\flat\flat}$. They all stand upon the fifth degree from *C*, and consequently are all fifths.

We require, therefore, a more exact tone-measure, and for it we take the smallest measures of our tone-system, the

HALF-STEP,

and the

STEP.

We are now enabled to give an exact statement of the tone-relations of any possible interval, by merely counting the steps and half-steps therein contained. Thus the second

c—*d*, for instance, contains two half-steps, *c*—*c*♯ and *c*♯—*d*, or *c*—*d*♭ and *d*♭—*d*♮. The third *c*—*e* contains two steps, *c*—*d* and *d*—*e*, or four half-steps, *c*—*c*♯, *c*♯—*d*, *d*—*d*♯, and *d*♯—*e*.

But it would be too troublesome always to give the exact measure of an interval in so many steps and half-steps, and for this reason there have been distinguished four classes of intervals, which in themselves at once express the exact measure of the relation. Each interval can be—

Major, or
Minor, or
Diminished, or
Superfluous.

Each *minor* interval arises from the diminution of a *major* one, or in other words, it is a half-step smaller than the same *major* interval.

Each *diminished* interval is a half-step smaller than the *minor* interval, or two half-steps smaller than the same major interval.

Each *superfluous* interval is a half-step larger than the *major* interval.

When we once know, therefore, how large the major intervals are, it will be easy to make of them minor, diminished, or superfluous intervals. And the best representation of the major intervals is—

OUR SCALE ITSELF;

for each tone in it forms with the fundamental tone a major interval. Consequently—

c—d is a major second,
c—e " a major third,
c—f " a major fourth,
c—g " a major fifth,
c—a " a major sixth,
c—b " a major seventh,
c—c " an octave,
c—d " a major ninth.*

When we remember now that—

The major second			contains	1 step,
—	—	third	—	2 steps,
—	—	fourth,	—	2 steps, and 1 half-step,
—	—	fifth,	—	3 steps, and 1 half-step,
—	—	sixth,	—	4 steps, and 1 half-step,
—	—	seventh,	—	5 steps, and 1 half-step,
—	—	octave,	—	5 steps, and 2 half-steps,
—	—	ninth,	—	6 steps, and 2 half-steps,

it will be easy to measure the other intervals.

Having once obtained a major interval, it will be easy to make of it a minor, diminished, or superfluous one, by adding or subtracting as many half-steps (by depression or elevation) as are requisite. If, for instance, we wish to change the major fifth *c—g* into a minor one, we must subtract a half-step, *i. e.*, change the *g* to $g^{\flat}$. $C—g^{\flat}$ is a minor fifth. The minor intervals from *c* are therefore—

c—d ♭, the minor second,
c—e ♭, — — third,
c—f ♭, — — fourth,
c—g ♭, — — fifth,
c—a ♭, — — sixth,
c—b ♭, — — seventh.

* We must bear in mind that these intervals are merely major, as related to the fundamental tone of the scale (*c*). The other degrees amongst themselves form various intervals; thus *d—f* and *e—g* are *not* major thirds; *f—b* is *not* a major fourth, &c.

In order to change *c*—*g* into a superfluous fifth, the *g* must be elevated a half-step. In order to make of the major seventh *c*♯—*b*♯ a minor seventh, *b*♯ must be depressed a half-step, and must become *b*♮. In order to make of the minor seventh *c*♯—*b* a diminished seventh, *b* must be depressed an additional half-step; *c*♯—*b*♭ is a diminished seventh. In this manner it is very easy to represent any minor, diminished, or superfluous interval.

In the last chapter we made mention of *enharmonic* tones; we find now intervals, which though of equal height in regard to the tones constituting them, have different names, and which, therefore, are called—

Enharmonic Intervals.

Thus, for instance, the minor third *c*—*e*♭ is enharmonic with the superfluous second *c*—*d*♯; the superfluous fifth *c*—*g*♯ is enharmonic with the minor sixth *c*—*a*♭, &c.

CHAPTER VI.

THE TONE SPECIES, SEXES, OR MODES.

We have seen that Music has at its command seven degrees, upon which, however, can be constructed a great number of tones and tone-relations. It is possible that all these tones and relations can occur in one composition. But since every work of art has certain limits of design and tendency, since it expresses a certain round of ideas and sensations, it is natural that the tones and tone-relations should be limited in the same manner; that for each composition there should be a certain circle of tones and relations, within which the composition should exclusively or principally move.

This circumstance facilitates the task of introducing the student into the empire of tone-formations, without the risk of his losing himself in the infinity of manifold forms.

The seven degrees, so lately mentioned, form the basis of every composition. But each degree can be represented in five different manners, and thus there are innumerable possibilities of combination.

But of all these possibilities, the system of modern Music has selected *two* as the only essential ones. They are called—

Tone Species, or *Modes*,

and are either *major* or *minor*.

In both are the seven degrees, and they are distinguished from each other by the relation of the degrees to each other and by the size of the interval which each degree forms with the first tone.

THE MAJOR MODE

has exclusively major intervals. Consequently all the scales we formed in the fourth chapter are major scales, and belong to the major mode.

THE MINOR MODE

contains also major intervals, with the exception of the Third and Sixth, which are minor. Since we know how to change major intervals into minor, it will be easy for us to change a major mode into a minor. We have but to depress the third and sixth to change *C*-major,

c—d—e—f—g—a—b—c,

for instance, into *C*-minor,

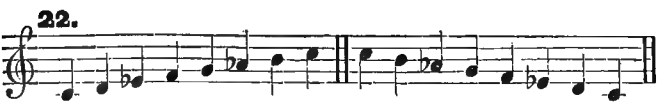
c—d—e♭*—f—g—a*♭*—b—c.*

Thus we find that the minor scale has the following steps

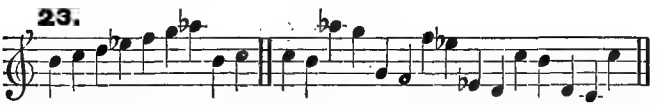
$$\underset{1}{c}—\underset{\frac{1}{2}}{d}—\underset{1}{e^{\flat}}—\underset{1}{f}—\underset{\frac{1}{2}}{g}—\underset{1\frac{1}{2}}{a^{\flat}}—\underset{\frac{1}{2}}{b}—c.$$

The most conspicuous step in this scale, is the one from *a*♭ to *b*, a step of a superfluous second. Like all other superfluous intervals, this progression in the course of the scale, affects us disagreeably.

22.



This, however, is not the case in every tone-succession; for instance, not in the following:



where the superfluous second has been avoided, and it is not our object to obtain a mild tone-succession, but a firm basis for our compositions.

CHAPTER VII.

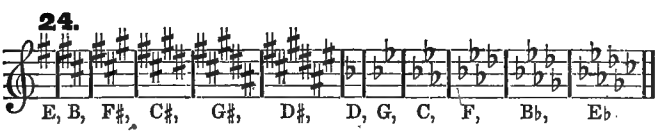
THE KEYS.

In the fourth chapter we have been taught the number of the *major* scales or keys, and how they can be formed. We can now form as many *minor* scales or keys. In the same chapter we have also learned what signature to give to each major scale or key. The signatures of the minor keys follow a different law. Their signature is not as the scale demands it, but each minor key has the signature of that major key which lies a minor third above it.

The signature of *A*-minor is not, as one would expect, a sharp before *g*, nor does that of *D*-minor consist of a *c*♯ and *b*♭; but *A*-minor has the signature of *C*-major, and *D*-minor has the signature of *F*-major.

Here—

24.



are the signatures of the most usual minor keys.

Two keys, (a major and a minor key,) which have the same signature, are called—

PARALLEL KEYS, *or* PARALLEL TONES.

The parallel-tone of a minor key, as we have seen, lies a

minor third above it, and, *vice versa*, the parallel-tone of a major key lies a minor third below it.

We can now more fully understand the object of the signature. It tells us—1, what degrees are to be depressed or elevated; 2, it serves us as the token of the key in which the composition has been written. But we know also that such signature can belong to two different keys; and in order to ascertain exactly in what key a piece is written, we must turn to its harmony. But until we arrive at that point, we will remember that generally

THE LAST TONE of a piece,

and if it ends with a chord,

THE LOWEST TONE of that chord,

in connection with the signature, will be a sure indicator of the key. If, for instance, the signature consisted of two sharps, and the lowest tone of the last chord were *b*, we would know at once that the piece is composed in *B*-minor, the parallel tone of *D*-major.

But what of those degrees in the minor keys for which the signature is not suitable? The ♯ or ♭ belonging to them is placed before the respective notes as often as they occur, thus making these elevations or depressions almost accidental.

CHAPTER VIII.

RELATION OF KEYS.

When we compare the different keys with each other, we find that each deviates from the other to a greater or less degree. Thus *C*-major and *G*-major deviate but in one tone, *f* and *f*♯. Comparing, however, the scale of *C*-major with *E*-major, we find that the two scales differ in four tones from each other; *C*-major has *f*, *c*, *g*, *d*; *E*-major has *f*♯, *c*♯, *g*♯, *d*♯.

Two keys which have several tones in common are said to be

RELATED.

We have just now seen that this relationship can take place in a greater or less degree, according to the number of tones which the two have in common. There are, consequently, different

DEGREES OF RELATIONSHIP.

Finally, we have already seen several manners of connection between different keys; the major keys were connected in the form of the Quint-circle; the minor keys, with the parallel major keys, and with their own major keys. There are, therefore, three kinds of relationship.

1. *Relation of Major Keys.*

Here the Quint-circle indicates the relationship with its degrees. The keys lying close together in the Quint-circle, deviate from each other in but one tone, and stand in the *first degree* of relationship to each other. When we spread the Quint-circle before us thus:

$$\overset{6}{G\flat}—\overset{5}{D\flat}—\overset{4}{A\flat}—\overset{3}{E\flat}—\overset{2}{B\flat}—\overset{\flat\,1}{F}—\overset{0}{C}—\overset{\sharp\,1}{G}—\overset{2}{D}—\overset{3}{A}—\overset{4}{E}—\overset{5}{B}—\overset{6}{F\sharp}$$

we find that each key has its two nearest relations as neighbors to the right and to the left.

Relatives of the second degree are those which differ in two tones. Thus *D*-major on one side, and *B*♭-major on the other, stand in the second degree of relationship to *C*-major.

2. *Relationship of Parallel Keys.*

The parallel keys are related to each other in the *first degree*, for they differ from each other in but one tone. Thus *C*-major and *A*-minor, *C*-minor and *E*♭-major, are relatives of the first degree.

When we combine this kind of relationship with the other, we perceive a new kind of relationship between the keys. We have found that each major key stands in relationship of the first degree—1, with its neighboring major keys; 2, with its Parallel key,—for instance, *C*-major with *G*-major, *F*-major, and *A*-minor. But now the major keys *G* and *F* stand again in the first degree of relationship with their Paral lel tones, *E*-minor and *D*-minor. Consequently we can con sider these minor tones as relatives of the *second degree* to the first major key (*C*-major.) The following diagram exhibits to us:

C-major,
|
F-major, *A*-minor, *G*-major, as relatives of the first degree.
| |
D-minor, *E*-minor, as relatives of the second degree.

We might pursue these degrees of relationship much farther, but this would be but an unnecessary waste of time and paper.

3. *Relationship of Minor Keys with their Major Keys, and amongst themselves.*

We know already that each minor key deviates in two degrees from its major key, in Third and Sixth. Consequently we should consider them as relatives of the second degree.

But a singular coincidence draws this bond of union closer together. The Tonic, (the first tone,) the Dominant, (the fifth tone,) and the Sub-dominant, (the fourth tone,) of each scale are its principal moments, and these three moments belong to the major scale as well as to the minor; and this communism of tones is so influential, (as we shall see at a later period,) that we can consider the two modes of the same tone as relatives of the first degree.

And finally we consider those minor tones which stand in the relation of Tonic, Dominant, and Sub-dominant to each other, as relatives of the first degree. Thus we consider *E*-minor and *D*-minor as relatives of the first degree to *A*-minor, though their scales deviate in two and three points:

D—*e*—*f*—*g*—*a*—*b*♭—*c*♯—*d*—*e*—*f*—*g*—*a*
a—*b*—*c*—*d*—*e*—*f*—*g*♯—*a*—*b*—*c*—*d*—*e*
e—*f*♯—*g*—*a*—*b*—*c*—*d*♯—*e*

When we combine these relationships with those found

under 2, we can form a similar diagram of relationships of first and second degree.

A-minor,
|
D-minor, *C*-major, *E*-minor.
| |
F-major, *G*-major.

It remains now for the student to form similar diagrams of other major and minor keys.

FIRST BOOK.

ELEMENTS OF MUSICAL COMPOSITION.

First Part.

Composition for Single Parts, (Monophonic Composition).

CHAPTER I.

THE FIRST FORMATIONS.

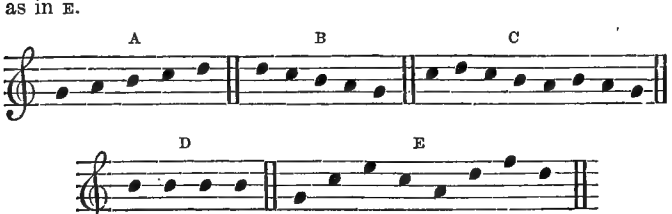
1.—THE TONE-CHAIN, WITH ITS SPECIES.

A MUSICAL composition consists of one or more successions of tones (tone-chains) which progress simultaneously, and which are intended for one or more instruments; for one or more voices; or for instruments and voices together.

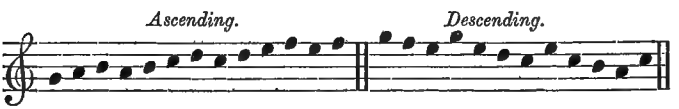
Beginning with the most simple—the single tone-chain—we have already to make a distinction. For a tone-chain does not contain merely sounds, which succeed each other, but that succession is regulated by certain laws (Rhythm), which indicate *when* one sound should succeed the other, and *how long* each sound is to continue.

But regardless of all rhythmical laws, we will, for the present, analyze the mere *tonical* contents of a tone-chain.

These tones can succeed each other in various manners. They can progress from low to high, from high to low, or these two directions can be mixed. We distinguish therefore *ascending* (A), and *descending* (B), tone-chains, and those, which both ascend and descend, and which we will designate as *vague* (C). The repetition of one and the same tone, too, might inappropriately be called a tone-chain (D); and finally the tones can succeed each other by regular degrees, as in A, B, and C, or by irregular degrees as in E.



It is easily perceived that *ascending* tone-chains produce the effect of *exaltation*, *elevation*, *tension*, while, on the contrary, *descending* ones produce the effect of *relaxation*, or *return to repose*. *Vague* tone-chains awake neither the one nor the other sensation distinctly, but with a certain *indecision* remain between the two and have a share of either. Yet with all their deviation in *detail* they can, in *general*, belong to one of the two principal species,—



We have now only to add that the motion of "step by step' is more *quiet* and *even*, while the skipping irregular motion is *restless*, *unsteady*, *and nervous*. But more of that anon.

Tone Regulation.

The vast resources which music has at its command make it absolutely necessary that, in our attempts to produce or invent tone-chains, we should observe a certain order and limit, in order to find our way amidst the enormous mass of tone-formations. We require a *foundation* upon which we can construct our formations, and from which we can derive them.

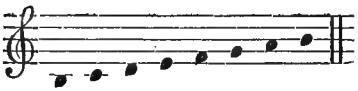
We will select the *diatonic scale* as our first foundation. But since even this scale has its different species, we will select from them the original and most satisfactory one:

The Major Scale.

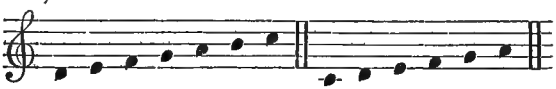
The reasons for this choice will in a future chapter become apparent of themselves.

The major scale, from its Tonic to its octave, *rests* upon the

Tonic, moves thence through the remaining degrees (*d* to *b*), and closes, satisfactorily, again upon the Tonic, or its octave. All this is perfectly agreeable to our feelings, and the more so when we compare it to other tone-chains; for instance, with



or with imperfect tone-chains (not beginning, or not ending with the Tonic).



We recognize the Tonic, therefore, as the *beginning* and *end* of the scale. The latter originates from the Tonic and returns to it. In juxta-position to the Tonic—*the moment of repose*,—the scale—*the moment of motion*,—is formed. Here we have discovered at last an antithesis which runs through the whole science of music—REPOSE and MOTION, TONIC and SCALE.

Analysis of the Scale.

When we examine the scale in its single progressions we find that it contains steps and half-steps, and that it consists of two halves, exactly alike in steps; *i. e.* each half containing two steps and one half-step.

C	*D*	*E*	*F*	*G*	*A*	*B*	*C**
	one	one	half		one	one	half

* We suppose that every student of composition is familiar with the major scales; but in case of the student's not being able to represent to himself such a scale at once, we refer him to the above measurement of the scale for assistance.

We know that on every tone of our tone-system we can construct a major scale, and that all major scales have like proportions; they all progress like the above *c* major:

1 step, 1 step, ½ step, 1 step, 1 step, 1 step, ½ step.

In order then to construct a major scale on any particular tone, we have but to write the seven degrees from it to the octave, and justify it afterwards, by means of flats or sharps, according to the above diagram. In constructing the scale on *a*, for instance, we first write the seven degrees:

A B C D E F G A

and measure each step. *A* to *b*, a whole step, agrees with the diagram: *b* to *c* ought to be a whole step, and consequently will have to be enlarged by changing *c* into *c*♯; *c*♯ to *d* is now a half-step, *d* to *e* a whole step; both in accordance with our model: *e* to *f*, however, is merely a half-step when it ought to be a whole one; consequently *f* has to be changed into *f*♯, and, for the same reason, *g* into *g*♯.

In constructing the scale of *d*♭ major, we would first write the degrees thus:—

D♭ *E F G A B C D*♭

and then regulate the distances from one degree to the other by means of sharps or flats, whichever is wanted.

The one of these tone-chains originates in *c*, the Tonic; the other leads to *c*, the Tonic; both find in *c* their centre and junc tional point.

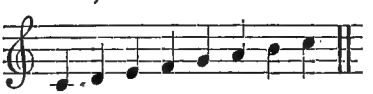
G A B C

C D E F

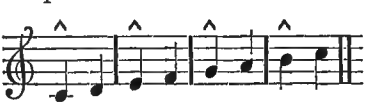
Even in this formation of the scale we find the Tonic the *chief point* from which the other tones advance, to which they return, and around which they move.

2.—Rhythmical Formation of the Tone-Chain.

We have until now considered the *tonical* contents only of the tone-chain and scale, and we have tacitly admitted that one tone after another should resound. This resounding, however, can happen at *equal* and *unequal* intervals of time; and the latter particularly, in a most infinitely varied manner. We will therefore begin again with the most simple, and imagine a regular succession, each tone of equal value; for instance, the scale in crotchets (quarter-notes):

1. 

But this form does not satisfy us, because one tone like the other passes by, without distinction. The longer we would continue this chain of equi-long sounds, the more fatiguing and confusing would it be to us. Our feeling urges us to distinguish and to regulate; we must divide this chain to make it easier of conception. Admitting the division by two as the easiest, we would begin perhaps in this manner:

2. 

and thus arrive at the simplest regulation of time, *Simple Measure.*

This regulation, at present, exists only in our imagination, or on paper; but to make it reality we distinguish every first note of a measure (marked ^) by a stronger accentuation. This accent makes every beginning of a measure perceptible, and by these

means we have introduced into our scale a variety to which decided and absolute necessity has led us.

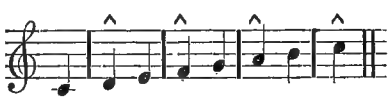
Our tone-chain appears now well regulated in regard to time, and this regulation has been made perceptible by the alternate change of strong and weak intonation; in short, it has been made rhythmical; it has received the *Rhythm.*

A Rhythmical Tone-Chain is called a Melody, and a melody is the first and simplest creation of art.

Already in our first attempt we found it necessary to begin and end with the Tonic as the most important tone, and its completeness and perfection was in fact owing to this beginning and ending thus. But now we have learned also to distinguish rhythmically important and unimportant tones. If our melodies shall now be round and perfect, rhythmically as well as tonically, we will find it desirable that they should have rhythmical chief notes for the beginning and for the end.

We experience an unsatisfactory feeling in the above melody, because, though beginning on a principal part it ends on an unimportant one; and the melody is lost, as it were, because the end-note has no weight.

We will therefore re-form our scale in this manner:

3. 

The beginning has lost its emphasis, but the succeeding notes and the satisfactory end remunerate us for it.

But perhaps we prefer not being tied to this particular form of beginning; it may be possible to have a beginning and ending alike satisfactory.

And here is the time to remember a principle which should accompany us through all our labors. "Whenever a formation appears to us imperfect in its parts, or not clear and comprehensible, we should always retain of it whatever we have found *good* or *necessary*—let it be found wherever it may—and afterwards try to supply what is wanting."

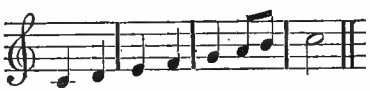
In this instance we know, that it is our object to place the beginning and ending of our melody on an accented part of the measure. We also know, that the eight notes of our scale have

to appear in four measures—at least we know at present of no other form. Finally, if the last tone has to fall on an accented part it must be either in the shape of a half-note, or a quarter-note, succeeded by a quarter-rest.

This noted down would give us a figure something like the following:

4.

and we see at once clearly what has to be done. The three wanting notes have to enter the vacant measure. The first of these can do so in the form of a quarter note; the other two have to become eighth notes.

5. 

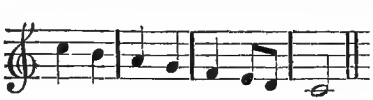
We have now arrived at a formation which corresponds with all our demands. It is—

1. In regard to tone-succession, beginning and ending on the Tonic.
2. It is rhythmically well regulated.
3. In regard to accentuation of beginning and end-note, it is distinct and well closed off, and thus satisfactory.

But at the same time we have obtained—

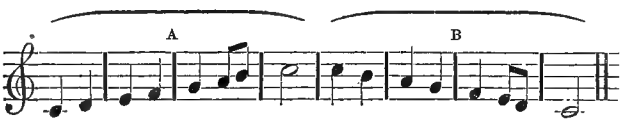
4. A variety of rhythm—three species of notes; half-notes, quarter-notes, and eighth-notes—and this variety proves itself at the same time,
5. A means of promoting our object: for, the end-note, the aim of the whole, has the longest duration; and the eighth-notes, immediately before it, serve to accelerate the movement towards it, and to make the end-note more characteristic. We have now a gradation of rhythm as well as of melody.

Thus far we have inadvertently represented all our tone-chains as *ascending*. Nothing prevents us now from attempting a *descending* one:

6. 

It exhibits a steady and satisfactory return to *repose*—the beginning of all our tone movements.

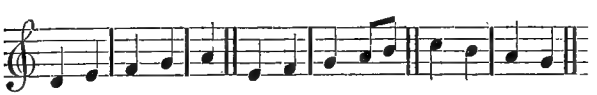
But both formations have a very one-sided character. The one is all elevation; the other is exclusively relaxation. Only the combination of the two in a larger whole can in every respect satisfy us.

7. 

We have now arrived at a tone formation which, issuing from the Tonic, rises in pitch and rhythm to the Tonic of a higher octave, marks this point by a rhythmical pause, and then returns in the same steady manner to the repose of the first tone. We perceive also that this formation is composed of two halves (A and B) which, each by itself perfect, combine to make the perfect whole, a whole consisting of two subordinate wholes. But though each of these parts or phrases resembles the other in rhythmical formation and tone-contents, the direction in the tone succession of each is exactly opposite; the one forming the reversed counterpart of the other.

Such formation, consisting of two perfect phrases, thesis and antithesis, is called a *Period.*

Formations which lack the satisfactory ending of a period or

8. 

phrase are called *passages.*

Retrospection.

We have now conceived the first ideas of composition, and realized them in tones. They were—

1. The *tone-chain*, with its different directions and progressions.
2. The first foundation of all tone succession—the diatonic scale.
3. The distinction between repose and motion in the scale.
4. The first and simplest rhythmical order, by the aid of which a mere tone-chain became a melody.

5. The fixed and manifold valuation of sounds, mensural division, and accent.
6. The melody strove to acquire a rhythmical marked point of beginning and ending and became a *phrase.*
7. This brought us to a variety of rhythmical motion.
8. The invented phrase (thesis) demanded a counterpart (antithesis), and the two together formed a *Period.*
9. A formation of a new nature—the passage—was indicated.

And thus we have arrived at the three fundamental formations of all musical constructions:

PHRASE—PERIOD—PASSAGE—

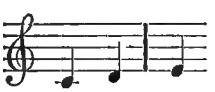
and have recognized the characteristics of their construction.

CHAPTER II.

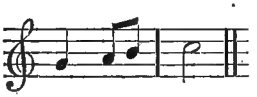
INVENTION OF MONOPHONIC PHRASES.

1.—THE DESIGN AND ITS EFFICACY.

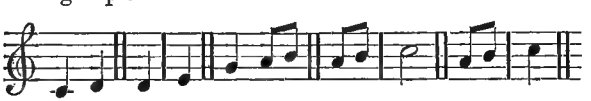
In order to arrive at new progressions we will return now to our first satisfactory phrase (No. 5). We see it constructed of different parts; in the first measures a series of quarter-notes; in the latter quarter and eighth-notes, which lead to the final note. Thus we can distinguish various tone-groups; for instance, a tone-chain of quarter-notes.

9. 

A group ending more satisfactorily is in the latter measures.

10. 

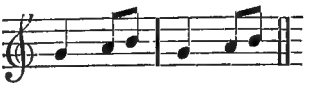
If we are willing to resign a satisfactory ending, we can select still more groups.

11. 

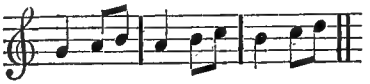
Such forms which contain the *germ* and the impulse of longer phrases are called *designs.* Each junction of two or more notes can serve as a design. Every composition consists of such designs, and it is for us to consider how we are to nurse these germs, how to apply them, and how to multiply them, in order to arrive continually at new phrases, passages, and periods. The invention of these designs is already sufficiently prepared. The simple scale has given us six, and every new formation adds to that number.

Every design can be applied by itself—

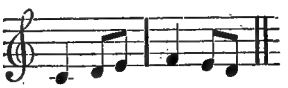
1. By repetition on the same degrees,

12. 

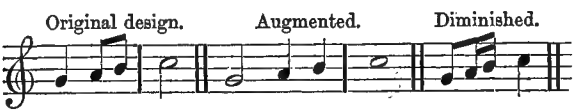
2. By repetition in a higher or lower range,



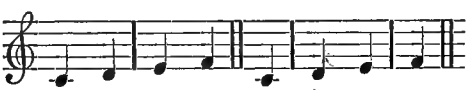
3. By repetition in opposite direction,



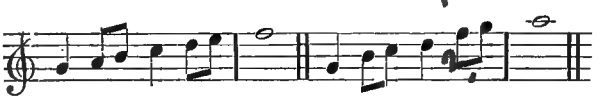
4. By repetition in notes of longer or shorter duration (aug mentation and diminution).

13. 

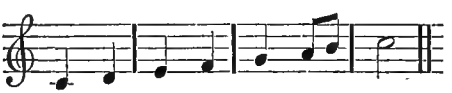
5. By changing of *thesis* (weak, unaccented part of a measure) into *arsis* (accented part of a measure), or *vice versa.*



6. By expanding or contracting the design; *i. e.*, by changing a smaller for a larger interval, or *vice versa.*

14. 

7. By combining one design with another, or more to a phrase;



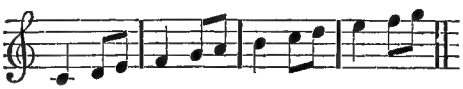
We need not mention that these different manners of application can change with each other, or combine to a greater whole.

We can already see how inexhaustible the field of musical formation is. We need therefore only show a few of these designs, and leave it to the industry of the student to invent others.

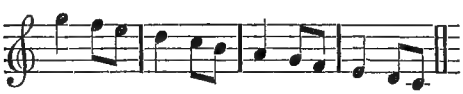
But to return again to our actual task, we will begin this time with the most subordinate of our formations—*the passages.* We say *most subordinate*, because they do not even end within themselves.

2.—FORMATION OF PASSAGES.

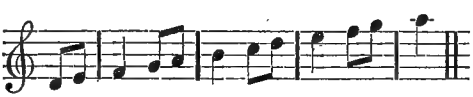
Each repetition of a design produces a passage. Thus the repetition of the third design, in No. 11, gives us the following passage:

15. 

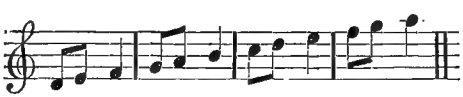
The same design reversed would give us the following:

16. 

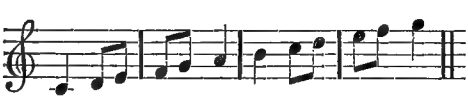
Were it our object to make No. 15 still more light and flighty, we could do so by beginning with the unaccented part of the measure (thesis).

17. 

Availing ourselves again of the new ending and beginning, we would be led to the following:

18. 

A combination of designs No. 15 and 18 would form an entirely new design, and consequently a new passage.

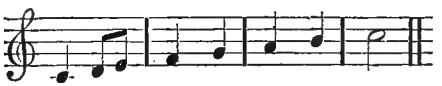
19. 

The further practice of these forms and designs remains now for the student. The advantage of this exercise consists in the facility of winning from every formation a new aspect or feature; and in the student's proper progression—not confusedly, according

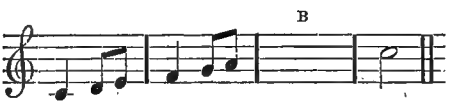
to his humor, design, and inclination—but retaining the good and necessary, and not seizing the new without absolute necessity.

3.—FORMATION OF PHRASES.

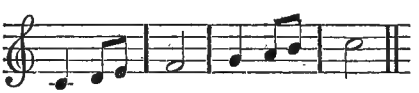
Here, too, we begin with the third design in No. 11, because of the smaller ones it is the most conspicuous. In No. 5 it appeared only in the third measure. But it might appear as well in any other measure.

20. 

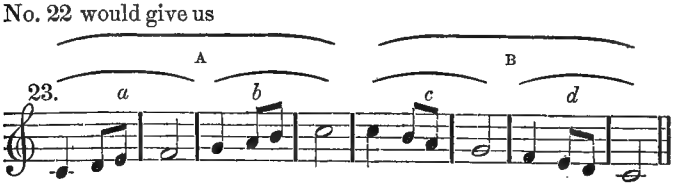
We might now attempt to repeat the most animated part:

21. 

This would leave us only one tone to fill the third measure, and while the beginning of this phrase would appear very animated, the latter part would be the more *dragging*. This leads us, then, to a new formation in which the different species of notes would be more equally distributed.

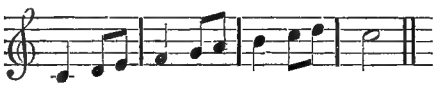
22. 

This phrase gives us something new to consider. The rhythmical formation has divided it into two different parts which are alike different from the phrases and from the halves of a period—thesis and antithesis. But while their rhythmical formation is satisfactory, their tonical formation is not; for either they do not begin or do not end in the tonic. We will call these formations *Sections*, and thus we have to distinguish in a period which No. 22 would give us

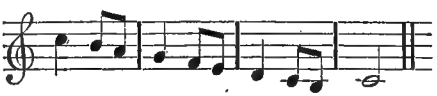
23. 

not only the thesis and antithesis A and B, but the sections *a*, *b*, *c*, and *d*, also.

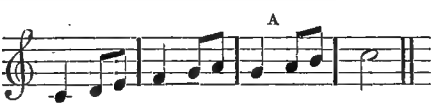
Let us now return to No. 21, and repeat the principal design:

24. 

The same reversed would give us:

25. 

In the one we have ascended above the Tonic, in the other we have descended below it, and in thus starting from and returning to the Tonic, deviations from the general direction have appeared. This can take place at any other point as well,

26. 

and since we have here, at A, gone back one note, we might as well go back two or three.

27.

But here, in No. 27, we have already filled four measures without arriving at the Tonic. We find it necessary to *enlarge* our phrases; we take four more measures and continue, perhaps in this manner:

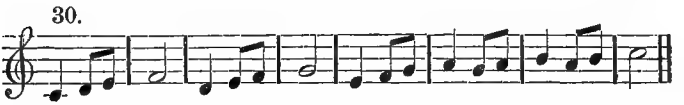
28.

We need not defend the slight variation in the sixth measure. A strict adherence to the design would have led us beyond the proposed number of measures. The dragging of the above might be corrected by the substitution of a short note for a long one,

29.

and this would lead us to end the above phrase perhaps like this.

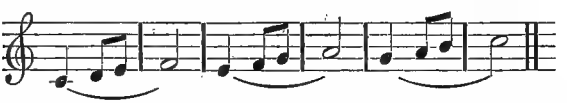
30.



We have now arrived at a greater liberty of formation. The different parts need no longer be of the same length, but require merely being balanced; two sections of two measures each are succeeded by a third one which has four measures and deviates in its form by being more animated.

Since we have now abandoned the division by 2, we might attempt slow phrases of three equal sections or divisions.

31.

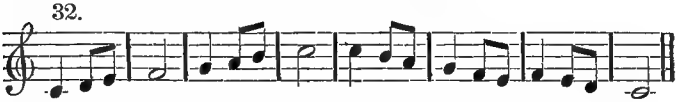


We have introduced this merely in order to show how untenable the common law is: that each phrase or period ought to consist of two or more measures. We shall give more instances in future; for with the same right with which we have introduced the figure 3 here, we shall introduce other deviations from the primitive proportions.

4.—PERIODS.

We have formed our first period of thesis and antithesis, and both parts were perfectly corresponding with each other, only that the tone-chains were conducted into opposite directions. This is the simplest formation; but No. 30 teaches us to give to the antithesis a more animated, different formation. Thus we might form No. 23 into a period by enlarging it thus:

32.



It will be advisable to observe at first, in these important parts —the thesis and antithesis—equality in the number of measures, and to accustom the mind to order and symmetry, before attempting other, more free formations.

CHAPTER III.

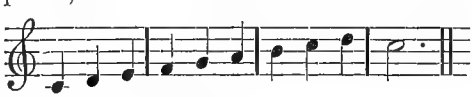
DISCOVERY OF NEW MEANS.

We have now discovered all the fundamental forms of musical construction, together with their characteristics. The forms were:

the Design,
the Section,
the Phrase,
the Passage,
the Period—with thesis and antithesis.

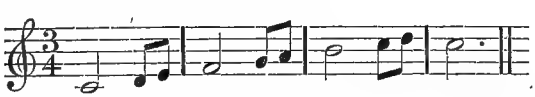
We will now again return to the third design of No. 11, and analyze its contents. It consists of three notes—one quarter note and two eighth notes, or together, a 2-4 measure.

But the three notes might also have equal value, and in that case we would be led to a new design which would give us the following phrase,

33. 

and with it "the Triple Time."

The difference between this and former designs is, that in the former ones every first note was longer than the following. The same proportions can be represented in Triple time, and by this means we obtain a new formation.

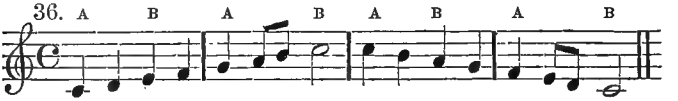
34. 

In our first design the first note was as long as the two following together. Here it is of twice the length. To give it thrice the length would lead us from Triple time to Common time, or from $\frac{3}{4}$ to $\frac{4}{4}$.

35.

We might have obtained the same result in $\frac{2}{4}$ time, if we had doubled the length of the first note or contracted two measures into one. In the latter case we should have obtained periods of twice two measures,

36. A B A B A B A B



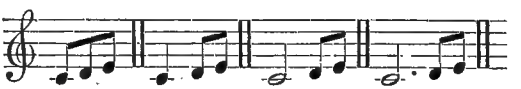
closing with what was once a chief part, but otherwise regularly built.

But, little as the difference between No. 36 and No. 7 may appear, it reveals to us what in future will be very important.

1. We perceive that No. 36 not merely originated in No. 7, but has also the same tonical content and the same rhythm of notes. The notes here marked with A have been chief notes or accented notes in No. 7, and have remained so in No. 36. Those marked B, have at least been chief notes, and have here less accent than those marked A, but more than all the remaining notes. We can, therefore, unhesitatingly change a $\frac{2}{4}$ phrase into a $\frac{4}{4}$ one, and a $\frac{4}{4}$ one into a $\frac{2}{4}$ one. Even if the end note of a small phrase should fall upon a former chief part, as in No. 36, it will still be sufficiently marked.

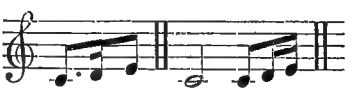
2. We perceive in the prolongation of the No. 33—35, a strengthening of the accent in one and the same design, by en largement of the time species,—

37.

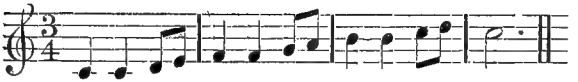


a means of expression which will become particularly important in vocal composition. It is clear that by means of ties and dotted notes many more gradations can be obtained.

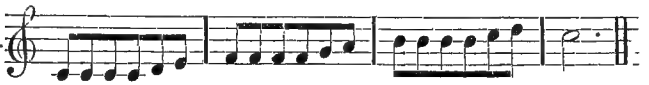
38.



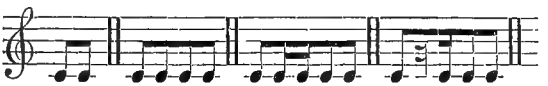
When we now return to No. 34, and analyze the design, we perceive that the first note contains, or is equal to, two quarters, consequently could be reduced into two quarter-notes ;

39. 

or we might continue the division still further, and reduce each quarter-note into two eighth-notes.

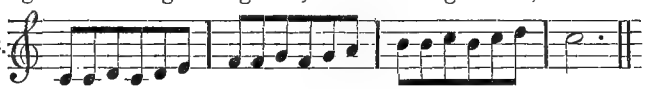
40. 

Here we arrive at a class of new designs which consist of the repetition of one note,

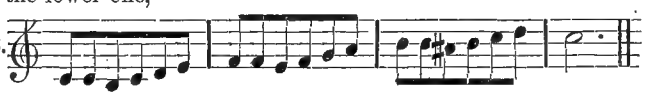
41. 

Such designs are, of course, of rhythmical nature, and serve to animate a phrase when we are limited to few tones.

But we return to No. 40. If we are not pleased with the frequent repetition of one and the same tone, we can easily exchange it for a neighboring one; either the higher one,

42. 

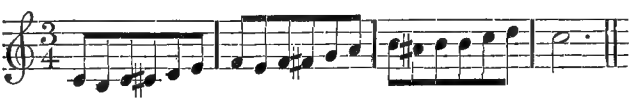
or the lower one,

43. 

Why have we taken *a*♯ intead of *a*? Because in all the former measures the interval from the third to the fourth note was only a half-step, and because this smaller interval of a half-step leads more flowingly upward.

Here, for the first time, have we introduced a foreign tone, and we have perceived at the same time that with the aid of such a one we can ascend more flowingly than with the *whole* step.

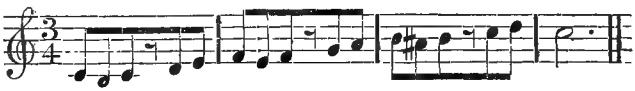
We can now introduce the neighboring tone much sooner, and introduce the assistant-note still later:

44. 

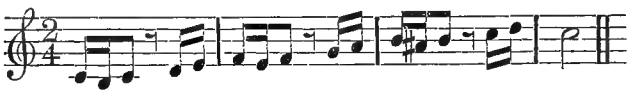
We have to repeat the *b* in the third measure, because there is no room for an intermediate tone between *b* and *c*.

Perhaps the continual motion in quarter-notes might appear

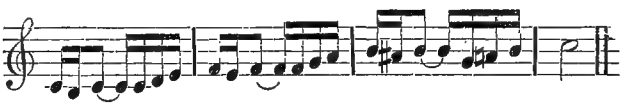
monotonous and trifling to us. We can avoid it by leaving out the second assistant note:

45. 

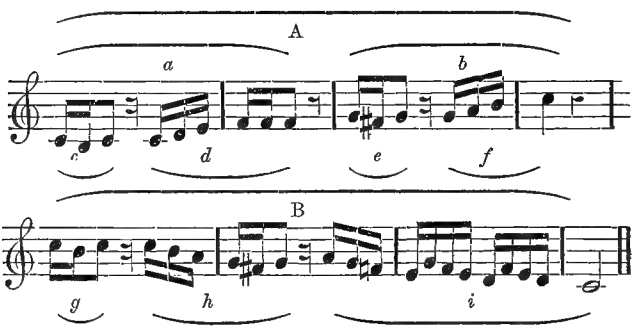
If we were inclined to make this interruption still more conspicuous, we might change it into $\frac{3}{4}$ time.

46. 

In the two last phrases we arrive at a new conspicuous formation. The tone-chain is divided by rests into small tone-groups. They are not as important as the sections, but nevertheless of some consequence. We will call them LINKS. Such links might have been obtained much sooner by the prolonging of notes.

47. 

And thus a period

48. 

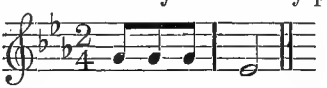
might be divided, 1, into thesis and antithesis (A, B.) 2, the thesis into two sections (*a*, *b*). 3, each section into two links, (*c*, *d*, *e*, *f*, *g*, *h*, and *i*.)

SMALL as the results of Part I. may appear in comparison with the works of our great masters, it will be still advisable for the

student not to disdain or neglect these first attempts. The advantages to be derived from them are many.

First of all, the student will acquire that systematic and analogical mode of proceeding which is so absolutely necessary to the mastering of any subject.

He will learn to limit himself, and to derive from any given subject the most manifold developments and results. To show how important such faculties are to the composer, we need but refer to the first Allegro of Beethoven's Symphony in C minor, which grows almost entirely from a design of four notes,—four notes which do not even distinctly indicate any particular key.

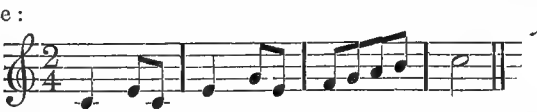


and yet these few notes have given rise to a composition which will claim the admiration of centuries to come.

But these simple formations serve also to facilitate the indispensable acquirement of composing without the aid of any instrument. It is here where the student can learn to represent to himself, by force of imagination only, tone-formations of more or less completeness. At a later point, it is impossible.

We warn the pupil, however, to guard against two faults. The one is the deserting of the analogous proceeding, so strenuously recommended, and the other, the losing sight of his object. If we had produced No. 46 immediately after No. 31 or No. 5, we should probably have obtained a good phrase; but the consciousness of the *how* and *wherefore*, and the inexhaustible source of analogous and legitimate formations would have been lost to us.

The second fault exhibits itself generally in the fact, that the pupil, in consequence of impatience, or under the impression of having exhausted the scale, proceeds to harmonic formations; for instance:



We finally advise the pupil not to confine his exercises to the key of *c* major, but to attempt them in every major key; and if he has once seized a design, never to rest until he has formed a Period or Phrase.

Second Part.

Composition for Two Parts, (Duophonic Composition).

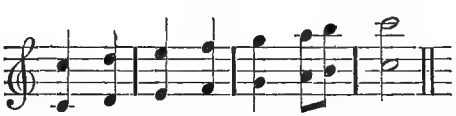
CHAPTER I.

THE DUOPHONIC COMPOSITION, DERIVED FROM THE MONOPHONIC.

The more we extend our monophonic tone-chains, the more baseless must they appear; not alone because, however interesting their contents, they are a mere tone-thread without volume, but because the Tonic, as the first and last note, offers too little weight against the more richly developed scale.

Let us attempt, therefore, the duophonic composition.

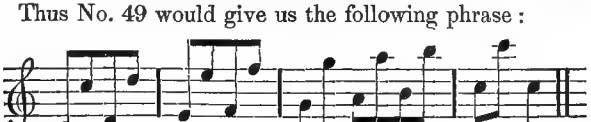
It lies nearest to add a similar tone-chain in a higher or lower octave. No. 5 treated in this manner would give us the following:

49. 

It is not to be denied that this phrase is duophonic, it employs two voices in different tone-regions. The consequence of this is a larger, broader tone-volume—particularly appropriate for massive effects.

But two such voices are mentally equal to *one only;* for, though in different tone-regions, they both have the same rhythm and tone-succession.

Yet this proceeding can form the basis of many monophonic phrases. We can transfer the tone-chain of two voices to a single one. Thus No. 49 would give us the following phrase:

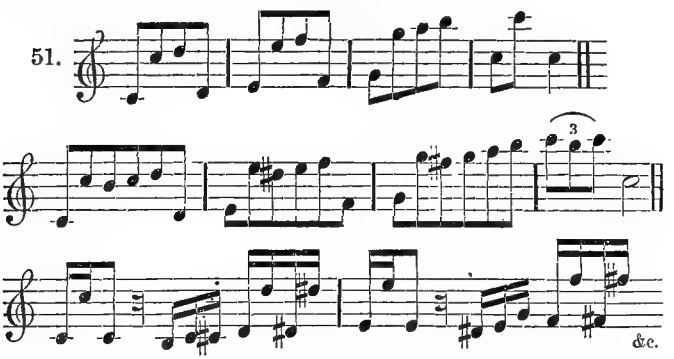
50. 

We divided the last half-note into eighths and quarter-notes,

because the transition from the sixteenth notes to quarter notes would have been too abrupt and violent.

When we now apply our first proceeding to this new basis for melody: *i. e.*, combine the former designs with the octave-designs (as we might call the present ones), we open again a new and inexhaustible source of formations. Without entering into any further details or gradual development we will give a few as models, and leave it to the student to practice others.

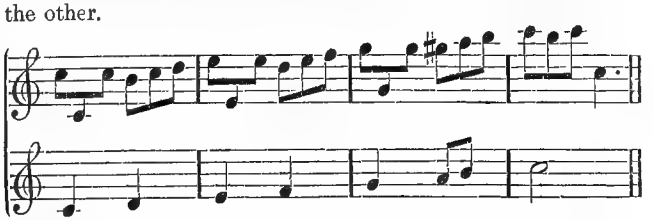
51.



Three or four tone-chains in different regions might be treated in the same manner, and give rise to many new designs. But such phrases would partake of such vagueness of character that they could only be used in extraordinary cases, and do not require any special practising.

Finally, we might attempt to gain a species of *pseudo*-duophonic composition by means of embellishing or circumscribing the one or the other.

52



Such apparent polyphony will be particularly useful in orchestral composition and in the accompaniment of vocal music, but will not benefit us much at present.

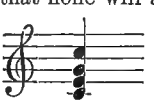
CHAPTER II.

THE DUOPHONIC COMPOSITION, DERIVED FROM NATURAL HARMONY.

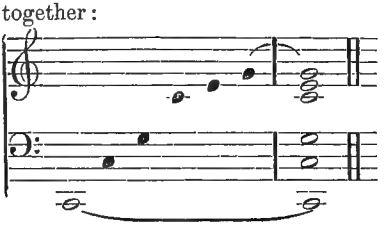
1.—MANNER OF ARRIVING AT IT.

However much or little we develope from these octave designs, our actual object, a real Duophony, in which each voice has a different fundamental melody, cannot be obtained from them. We require for this another basis showing us what sounds of two different voices, according to the nature of the tone-world, actually belong together.

Let our ear be the first judge of a tone which agrees with another; say, for instance, with the tonic *c*. It is certainly not *d*. But the following, *e*, answers our purpose. To these, again, we can only add *g*, and after that none will answer but the octave *c*.



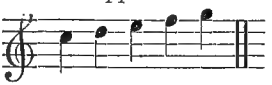
What we have here accidentally discovered is fully confirmed by the science of acoustics. The latter tells us that the following sounds belong together:

54. 

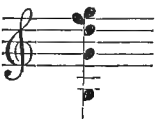
The Tonic is the basis, *fundamental tone*, of the whole mass. The ear acknowledges in this combination the most perfect concord. We will call such tone-mass "Harmony," or "Harmonic mass," and its lowest tone we will call the *fundamental tone*. The above combination is therefore our first harmonic mass.

Following the sounds which acoustics designate as the next succeeding, we meet with a sound not exactly belonging to our

scale; we shall speak of it in future—and immediately after it, a part of the scale makes its appearance.

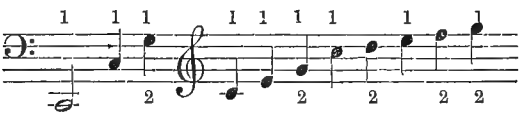
55. 

Of these, *c*, *e*, and *g* belong to the first mass; *d* and *f*, however, do not agree with its fundamental tone. The two latter, exiled as they are from the first mass, unite very well with one tone at least of it—*g*—and form with it a second harmonic mass.

56. 

Our ear tells us that these belong together, and in the course of our investigations it will be proved in another way.

When we now consider our present tone-group we find:

57. 

1. That only the five last tones are in the regular succession of the *scale*; *a* and *b* and the higher *c*, are wanting; for the six preceding notes have neither the form nor connection of the scale.
2. That nine notes (those marked 1) belong to the first harmonic mass, but passing all repetitions, the latter consists only of the notes *c*, *e*, and *g*; the same which our ear has already chosen for us. These notes are placed very regularly—each one a *third* from the others. The Tonic is the fundamental note.
3. Five other notes (marked 2) form the second harmonic mass, which is not alone inferior in number of sounds constituting it, but is also formed less regularly. The fundamental note of this mass is the thrice-repeated *g*; a tone which we have discovered in our first mass. Adding to this fundamental tone the highest tone, *f*, we discover the boundary-tones (p. 56) of the scale which move around the Tonic, and of which we know already that they are related to it.

We have long designated the fundamental tone of the first mass by the word TONIC. We will now distinguish the fundamental tone of the second mass by the word DOMINANT. The *why* of calling this tone the Dominant will be shown at some future time. For the present it deserves that name, if for nothing else, at least for the fact that it is the basis of the second mass, and is the junctional point of the two masses.

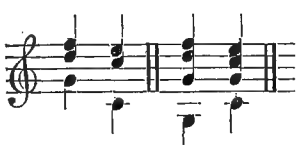
This tone, the "Dominant," is the fifth note of every scale, or in other words, the Fifth of the Tonic.

Formerly we placed

Tonic and *Scale*

in juxtaposition, because the former was the origin of the latter, and was the beginning and end of the scale. Here we find the Tonic again in the same capacity; but this time it is supported not only by octaves, but by the whole first mass, which latter we shall therefore call "tonical mass," or "tonical harmony."

Opposed to this tonical mass we find, now, the second mass, which latter returns to the first, whence it originated. And this is done in the most simple manner. The fundamental note of the second mass goes to that of the first (the tonic); if an octave of the dominant is existing it remains as the fifth of the tonical mass; *f* proceeds into the nearest tone of the first mass, *e*, and *d* can do nothing better than to follow this direction, and, consequently, goes to *c*.

58. 

This inclination of the second mass towards the first becomes the most prominent when the tone *f* is in existence. It is less prominent when the two others only, *g*, *d*, are used. For these two form a fifth exactly like one in the first mass (*c*—*g*), and can partake, as it were, of the nature of the first mass, and form a *momentary point of repose.* The same *f*, as we have seen, is also quite distant from the first harmonic combination which nature has given us (No. 57), and in which the interval of the seventh (*g*—*f*) is not contained.

2. APPLICATION.

We can apply our present tone-group.

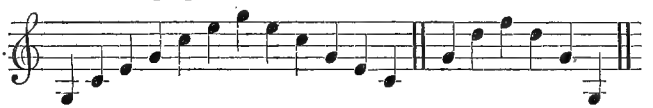
1. Melodically, for new tone-chains.*

2. Harmonically in the two masses, and upon the two together we can base the composition of duophonic phrases.

Melodic Application.

It is not merely the still imperfect scale, *c, d, e, f, g*, which can serve as a basis for our melody, but we can also use the succession of all tones belonging to one and the same mass.

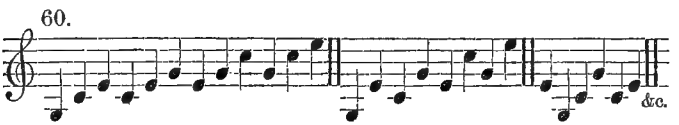
59.



It is plain that the first mass, on account of its regular construction and its number of tones, is much more productive and appropriate for a melodic foundation, than the second mass. But in reality the melody of either mass consists of only *three tones*, with their repetitions.

In No. 59 these masses have been used in their regular order, *i. e.*, either ascending or descending. This leads us to attempt them in *vague* directions; for instance, the first mass:

60.



But the limitedness of our tone-group is always in our way, and we find that repetition of tone or design and the development of Rhythm will be necessary to produce variety of invention from such insufficient means.

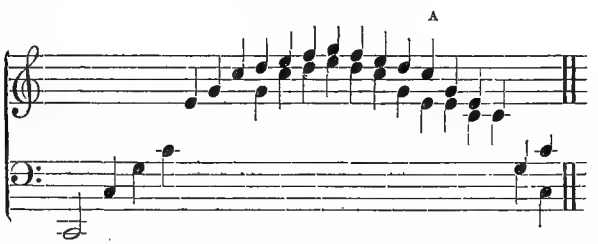
Harmonic Application.

Having achieved thus much, for the proper estimation of our means, nothing remains but to apply them in the formation of duophonic phrases. In this we must consider the upper voice as the *principal*, and the lower as *subordinate* voice, or *accompani-*

* Our first foundation for melody was the MajorScale; here we have discovered the second foundation, the harmony, or the harmonic masses.

ment; for, the higher sounds are, agreeably to their nature, more prominent, and are melodically much better connected (No. 57.). It is therefore our present object to accompany each tone of our tone-chain by a second, lower tone, which agrees with the first, *i. e.*, belongs to the same mass. But since in either mass we have a choice of several notes, we will always choose the nearest for accompaniment; reserving, however, the right to make exceptions whenever necessary. Below is the fundamental form of Duophony.

61.



In the first eight accompaniments we see the alternate change of first and second mass, and after this they belong exclusively to the first mass—though the *g* at the end might belong also to the second mass.

Why at A have we not taken *g*, the nearest tone, instead of *e*? Firstly, because *g* had but just been used, and the repetition of it would have caused an unnecessary stoppage in the second voice; secondly, because *e* in connection with *c* designate the first mass much more distinctly than the *g*, which belongs to both masses. The repetition *does* take place in the very next moment, but then it happens at places where the first mass, under any circumstances, remains stationary, and where it can be done without injuring that change of masses which we had in view.

Why have we commenced our accompaniment only with the eighth tone? Because then only we could safely decide upon it, and because we have made it our principle, always in doubtful cases, to retain that which is undoubted, and from this certainty it was easy afterwards, (from A to the end) to regulate whatever was uncertain.

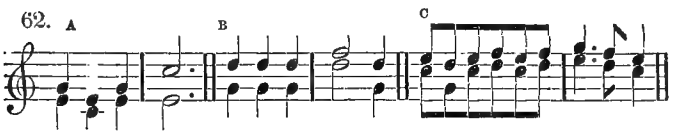
3. HARMONIC DESIGNS.

We recognize now more distinctly what we can effect with our

present material. Until now we have only known two classes of designs and formations, viz., *tonical* and *rhythmical designs.* We can add now a third class, viz., *harmonic designs*, which we can produce:

(A) from the first mass exclusively.
(B) from the second mass exclusively.
(C) from the alternate use, or from the mixture of the two.

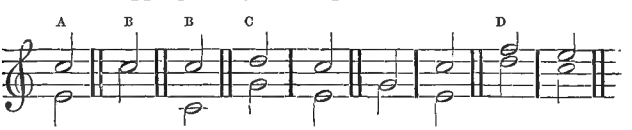
62.



4.—THE CADENCE.

We have discovered already that the first mass has taken the place of the Tonic, or the Moment of Repose. The Tonic is the principal tone of this mass, and is most effective in the upper voice. We shall effect our cadences, therefore, with the first mass, and most appropriately in the position of A.

63.



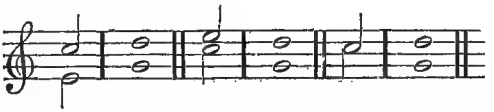
unless we resign the harmony and lead both voices into the Tonic, as at B.

We have, further, placed the second mass in juxtaposition to the first; exactly as we formerly placed *Tonic* and *Scale* in juxtaposition; and as formerly the scale moved into the Tonic to effect an ending (cadence), thus will the second mass move now into the first (C), in order to accomplish the same object. The third tone only is thereby inadmissible, because (D) it would prevent the resolving of the upper voice into the Tonic, in order to end there.

5.—THE HALF CADENCE.

Simultaneously with the former we have, however, discovered that the second mass without its third tone is appropriate to serve as a temporary point of repose. We are, therefore, no longer limited to the single point of repose—the Tonic—but we

have a second one, however imperfect. This latter we will apply in the ending of the thesis,

64. 

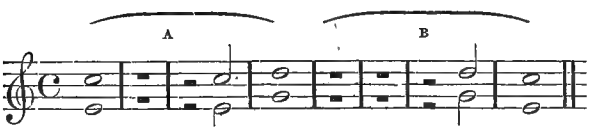
and call it a *Half-cadence*, while the first will be appropriately designated by *Whole cadence*, *Full Cadence*, or simply "*Cadence.*"

CHAPTER III.

THE DUOPHONIC COMPOSITION.

Now, at last, we can resume our actual work. It is our object to form tone-chains of the most perfect form at present known to us—in the form of a Period.

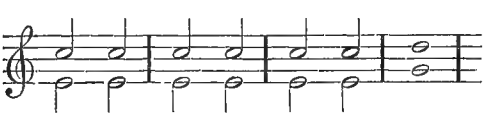
First of all, let us regulate our two masses into a Period.

65. 

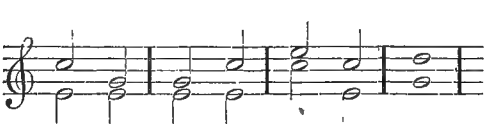
The beginning with the first mass lies probably nearest. The thesis (A) makes its cadence from the first into the second mass. The antithesis (B) makes its cadence from the second mass into the first. The vacant space can be filled out according to the general laws of Tone-succession, Progression, Harmony, and Phraseology which we have learned.

And here begins again the practice, and with it the industry of the student.

We might fill the thesis with the notes with which it began,

66. 

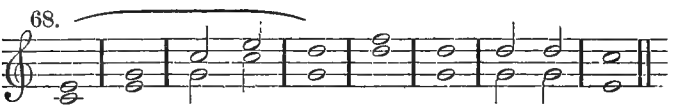
but that would be insupportable monotony. Therefore we will retain for the present the first mass, but not the same notes; perhaps in this manner:

67. 

This attempt is an improvement upon the first; but the character of the melody is vague, and the rhythm is very monotonous. We intend to animate the latter, and the melody ought to have

a more decided direction, as we have been taught in our first formations of Phrases and Periods. In order, then, to produce again the melodic gradations of thesis and antithesis, we should probably form the following:

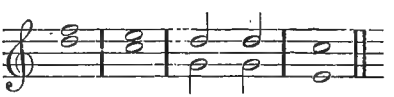
68.



Here the thesis ascends, but descends again to make the half cadence more satisfactory. The antithesis takes the opposite direction; and the Rhythm corresponds with the gradation of the melody. In order to retain the characteristic movement of the thesis even in the second voice, we have given to the *c* of the second voice a *g* as accompaniment.

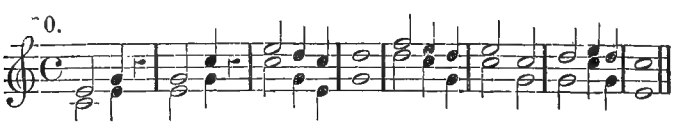
But in the antithesis we find that the second mass is but little appropriate to form a phrase by itself. This leads us now to a mixture of the two masses. The antithesis might be formed in this manner:

69.



it would nevertheless consist principally of the second mass, and the first would be merely passing. But with this we have returned from the emptiness of what we might call harmonic melodies, to the more closely-connected diatonic tone-succession. The mixture of the two masses offers us, also, new means for the thesis. We need not remain so long in the first mass, we can touch the second:

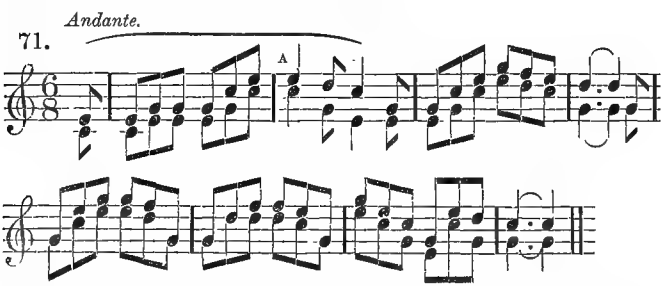
70.



The ascending of the thesis is here already exhausted with the third measure, and the second mass is touched, immediately before the half-cadence. At the same time, by means of rhythmical division, the two first measures of the thesis appear as two separate *links;* the antithesis, without such links, ends more flowingly. We perceive how the first design originated from

No. 68, and is repeated in the second measure. We perceive, also how the design of the third measure is repeated in the fifth, (at least rhythmically). Were we in possession of the tone *b*, the melody of the seventh measure would probably be, *d*, *c*, *b*.

The further development and practice is left to the student, but he will perceive more and more distinctly, that with our present poverty of tones, a careful employment of rhythm and a clear distribution of it, will lead him to an animated and effective arrangement of the whole. Thus No. 68 led to the last phrase, which, again, might lead to the following:



We perceive here, that the thesis falls into two sections, of which the first (A) belongs entirely to the first mass, merely touches the second mass, and thus melodically and rhythmically forms an imperfect *cadence*, because the end note does not fall upon a rhythmical chief-part. The same cadence appears at the end of the phrase; but this time it is *perfect*.

CHAPTER IV.

COMPOSITIONS OF TWO AND THREE PARTS.*

When we now consider how distinctly, in our previous formations, the thesis separated from the antithesis, by means of entering the second mass on a rhythmical chief-part, and how much more satisfactory a whole it forms, it leads us to form from

Thesis and *Antithesis*,
a *First* and *Second part*,

which parts *for the present*, are distinguished from a single Period, merely by the even more distant separation, and by the fact that each strives to be considered as a different whole.

This leads us, then, to the simplest

TWO-PART FORM.

of composition, as we find it in many Marches, Songs, Dances, &c.

We have formerly already found phrases of a greater number of measures (No. 30). Let us employ them for the two-part form.

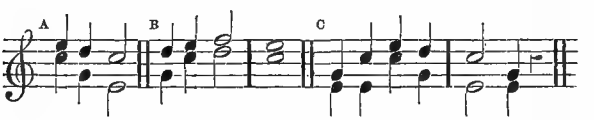
Each part strives to be an independent whole; each ought to have, therefore, at least the length of a Period—eight measures. These are the regular dimensions, but we know already that they can be larger or smaller.

If the first part is intended to be an independent whole, it ought to have the most perfect form—the form of the Period, with thesis and antithesis. But nevertheless, *the part* is merely part of a larger whole, and, therefore, cannot have a perfect cadence, but must let us expect the second part. It ends, therefore,

* We draw the attention of the student to a distinction which we have made here, and the lack of which, in other theoretical works, has been the source of much confusion. We refer to the use of the word "part." If using it in relation to number of voices, we speak of compositions *for* one, two, or more parts. If using it in relation to Rhythm, or form in general, we speak of compositions *of* one, two, or more parts. As we advance further we shall employ the words monophonic, duophonic, triphonic, tetraphonic, pentaphonic, &c., &c., to designate compositions *for* one, two, three, four, five, &c., &c., parts, and endeavor to confine the word "part" exclusively to Rhythm and form.

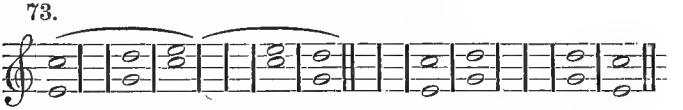
as formerly the thesis, with a half-cadence. Were we now to end the thesis of the first part in the same manner, the same ending would appear twice in succession; consequently, the half-cadence of the *Part* would lose its strength, and the formation of the whole part would be monotonous. The thesis can therefore only be marked by a step from the second into the first mass. This is a full cadence, but in order to make it less important, it is advisable to represent this cadence *imperfectly*,—either by transposition to a former chief-tone (A) or by placing the Tonic into the lower voice (B) or by an insignificant touching of the second mass (C) which leads to the actual cadence.

72.



If the first part has now become a perfectly-closed phrase, the second part has the same right, only that the latter makes a full and perfect cadence from the second mass into the first. If we intend to give to this second part also a perfect thesis, we can do so by means of a half-cadence, which can now be succeeded by the full cadence, without deducting from the strength of either. But this perfect thesis is not absolutely necessary, because the first part has already had so distinct an organization. The plan of a two-part piece wonld therefore be like this:

73.

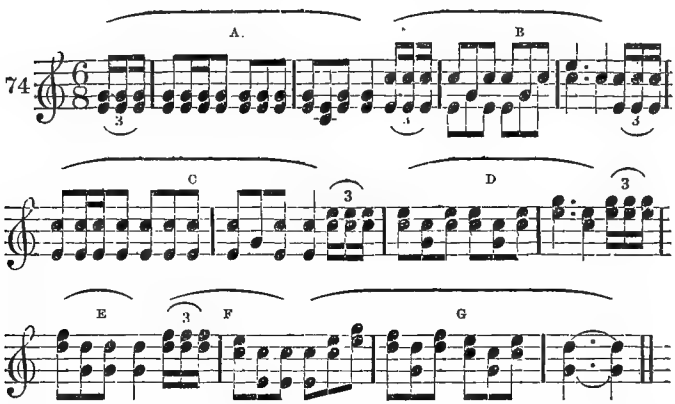


The further practice of this can again be left to the student.

But why can the second part continue any longer without interruption than the first part, and why is the thesis of the first part a fitter place for Sections than the antithesis? Because at the commencement the contents ought to be given distinctly and decisively, and because in proceeding towards the end, the motion ought to be accelerated, and therefore progress more connectedly.

No. 71 would be an example of a two-part phrase, of twice four (instead of twice eight) measures. But we can also go beyond the original dimensions of twice eight measures, and in that case we would again have to depend upon the rhythm for our means.

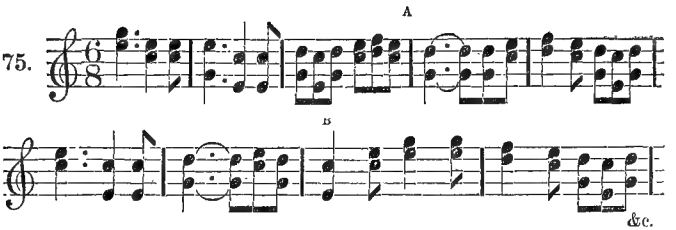
It becomes then our object to multiply our tonical means, as it were, by means of rhythmical tone-repetitions, tone-figuration, &c., &c. The following



phrase may serve as example of a first part of three times four measures, which has chiefly made use of tone-repetition. Only the variety of the Rhythm makes such extension possible and bearable. It is easily seen that the first eight measures contain in reality nothing but the steps of the melody, from *g* up to *c*, *e*, and *g*. It is only a decided and distinct grouping which can make so numerous a tone-repetition comprehensible. We see that the whole phrase falls into sections of three times four measures, A and B, C and D, and E, F, and G.

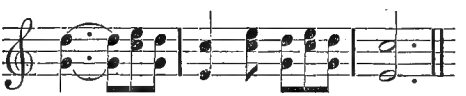
Judging this phrase according to the acknowledged fundamental form of a periodically-constructed first part, we would have to consider the ending of D as the end of the thesis, and E, F, and G as antithesis. In that case the thesis would have double the length of the antithesis. But its two halves with their subdivisions are so well separated, and so regular, that exactly in consequence of this, no misproportion is experienced in the unequal length of the two parts. In like manner we might prolong the antithesis, by either composing it of equal sections, or, by giving it an Appendix (Coda), *i. e.*, repeating the last section. The following little phrase—in which, by the bye, we have not observed the original melodical direction of the thesis, and have made use of a gentle relaxation—may serve as example.

75.



The thesis closes at A in the fourth measure. The whole ought to close in the eighth measure at B. Instead of this, the voices proceed immediately, without giving the end-note its proper rest, and with the ninth measure begins a repetition of the whole antithesis. The final link, merely, might have been repeated;

76.



a figured re-formation of the repetitions would also have been admissible,—finally, the junction of the two or more repetitions might also be possible.

To favor such *Codas*, it is advisable to make the preceding cadence imperfect,—either by means of tone-position, or by variation or abridgment of rhythmical quantity; the latter has been made use of in the above. The comprehensibility and simplicity of the whole has permitted us to deviate from the strict proportions. We have also introduced a kind of "leader" to the Coda.

Such Coda, however, premising the good proportions of all parts, is not alone admissible at the end of the antithesis, or second part, but it can also be employed at the end of a thesis. This requires neither example nor instruction.

Retrospection.

At the very beginning of monophonic composition we have represented the fundamental form of all tone-formations:

	Beginning,	Progress,	End,
or			
	Repose,	Motion,	Repose,
by			
	Tonic,	Scale,	Tonic.

Our monophonic phrases corresponded perfectly with these ideas. The form of the *Period* obeyed the same laws. But when we now examine our former (monophonic) Periods, we see that but a feeble tie connected thesis and antithesis. For generally, each was sufficient in itself, because thesis and antithesis led from the Tonic through the scale, back to the Tonic; and only the ascending or descending direction marked the one or the other.

With the aid of the two harmonic masses and the two different cadences we have perfected the periodic form. The fundamental forms

Repose,	Motion,	Repose,
Tonic,	Scale,	Tonic.

might thus be represented in the harmonic Period:

Repose,		Motion,		Repose,
Repose,	Motion,	Repose,	Motion,	Repose,
Tonic,	Tonic Scale,	Tonic 8va.	Scale,	Tonic.
Tonic Mass,	Motion,	Half-cadence,	Motion,	Full Cadence.
Repose,		Motion,		Repose.

This more perfect periodical construction led us to the two-part form, which again corresponds with the same conceptions and fundamental features—

Tonic Mass, Motion, Half Cadence, Motion, Full Cadence.

If we represent its external construction of two parts of twice eight measures, with periodical formation of each part into thesis and antithesis:

First Part.		*Second Part.*	
8 measures.		8 measures.	
Thesis,	Antithesis.	Thesis,	Antithesis.
4 measures.	4 measures.	4 measures.	4 measures.

we find, that the first thesis belongs chiefly to the tonic mass, and ends regularly in the same mass. It is the beginning of the whole tone-development; therefore the place where the design of the Period, or its designs, are settled; the moment which we have called *Repose*. The first antithesis, with the half-cadence of the first part, together with the thesis of the second part, form the *Motion*. In the antithesis of the second part, the first

mass ought now again to be predominant; but since the full cadence of this part is of itself decisive enough, we need not follow this rule strictly. We have permitted ourselves even to solder, as it were, the thesis and antithesis of the second part. If after this the end should still be unsatisfactory, we can prolong it by codas, and thus strengthen the tonic mass.

Compositions of Three Parts.

The last view we have taken of the two parts in one mass, shows us, that in spite of the separation of the first part by means of a cadence, there are in reality *three* principal moments in existence. We might therefore easily divide the *two* parts into *three:*

Repose,		Motion,		Repose.
First Part.		*Second Part.*		
Thesis,	Antithesis,	Thesis,	Antithesis.	
4 measures.	4 measures.	4 measures.	4 measures.	

First Part.	*Second Part.*	*Third Part.*
8 measures.	8 or 16 measures,	8 measures.
Repose.	Motion.	Repose.

Here we have again formed a Part from a mere thesis (belonging to the first part of a two-part composition), which part can have a thesis and antithesis, and end most properly with a full cadence; we have given it, also, double dimensions. The second part begins with the second mass and ends with a half-cadence. The third part is an exact, or similar—a complete or abridged repetition of the first part, ending, probably, with a coda.

There is an imperfection in this three-part form: in the full cadence of the first part, which in reality is in itself perfectly satisfactory, instead of leading us to expect a continuation.

It is of importance that we should clearly comprehend these proportions; for they guard us against confusion, and direct and facilitate our own invention—*exhibiting* to us continually the *object*, and breaking the way to it. When we have once seized a design and do not lose sight of these proportions, a safe progress will never be wanting. On the contrary, we shall rather see too many ways, and require quick decision and determination to break through our hindering doubts.

CHAPTER V.

THE DOUBLE DUOPHONIC COMPOSITION.

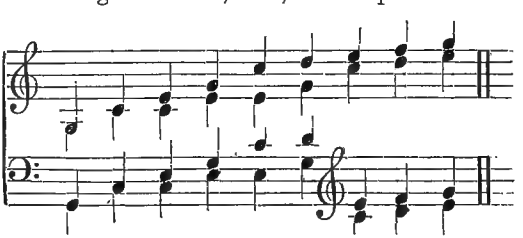
We cannot, with our natural notes as means, extend the duophonic composition any further, without falling into undue repetition and losing sight of perspicuity. We can conclude this from the fact that we have only two masses, and only two essentially different cadences, which latter had to be repeated once already in a composition of merely two parts; when with codas, still oftener. We experienced this imperfection in the three part form, and in still more extended forms there would certainly be too much repetition.

But the question is; whether we could not obtain an *intrinsic* increase of our means? As soon as we add *new* notes, our present system will no longer be sufficient. Such acquisition remains, therefore, for a later chapter. For the present we have nothing but

the increase of the number of voices.

Since the two voices which we have used until now agree so well with each other, the double duophonic composition seems to be much more convenient than the triphonic. But in order to double our voices without confusion, we will give to each of them a different tone-region. Here, then, are our present means:

77.



What do we gain by it? First of all, a larger and broader volume of tone, if our voice-couples move in parallel directions. This certainly makes our whole tone-mass less susceptible of light motion, and besides this, we have gained nothing absolutely new;

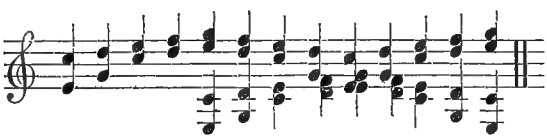
for the two couples move in equal intervals and direction; but this leads us to attempt

1, opposite directions,

2, different intervals of the voice-couples.

Wherever the masses change regularly, our voice-couples can unhesitatingly move in opposite directions.

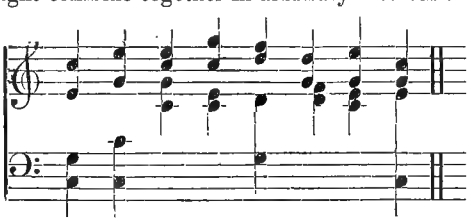
78.



We will call this kind of motion, *Contrary Motion.*"

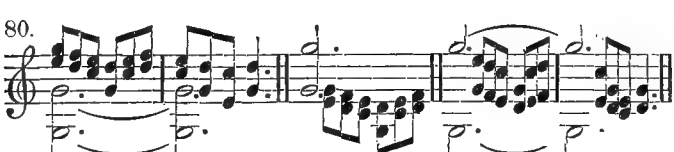
This and the former application of the double duophonic manner are the most natural, because they are based upon the generally most natural form of accompaniment (No. 61) of the duophonic composition. In *single instances*, however, the two voice-couples might combine together in arbitrary intervals.

79.



Since we have further discovered that the fundamental note of the second mass belongs to the first, two voices might sustain this mutual tone in various manners, while the others might move in the two masses at pleasure.

80.

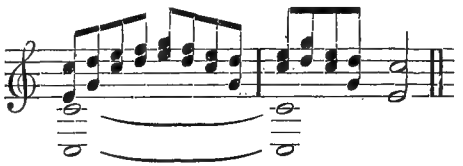


We will call such tones, which contiuue throughout the movement of the other voices, "*Sustaining tones,*" for they give to the whole tone-movement a material and bodily connection.

But since all our tones and masses originate in the Tonic, we can bodily realize this intellectual unity by leading our upper

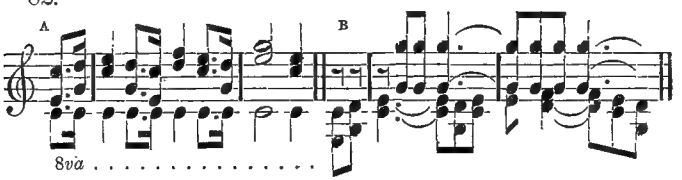
voices through the two masses and their different intervals, while the lower voices sustain the mutual fundamental tone, "the Tonic."

81.



These sustaining-tones can be animated by rhythmization of various kinds, which either strengthens the rhythm of other voices, or enters into a juxtaposition to it; remaining stationary where the other moves, or moving where the other remains stationary.

82.

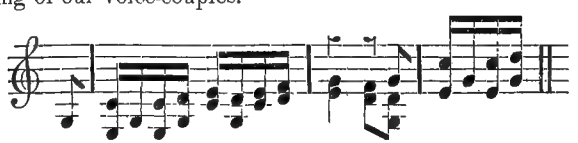


When we add to these new formations:

1. The doubled voices (No. 77).
2. The contrary motion (No. 78).
3. The arbitrarily-composed masses (No. 79), and,
4. The sustaining-notes (Nos. 80 and 81)—the double duophonic and the single duophonic compost, we have our whole material before us.

It gives us a new juxtaposition of *greater* and *lesser* mass, and with it a third class of gradation, which until now could only obtain by the direction of tone-succession, and by the rhythm. In this new juxtaposition we find, also, the means of more characteristically representing the more animated or light, and the more firm or heavier character, than by mere rhythmical accent. But even our former means of gradation find a new sphere in the ascending of our voice-couples.

83.



These are the nearest formations of the double duophonic composition; they give sufficient material for the exercise of the fundamental forms of all musical construction. They only require a few directions in regard to

Application.

Formerly we had only two voices at our command, which we never separated, in order to have always Harmony. We have now twice two voices, but can get along with a single voice-couple, out of which we gained the just-mentioned juxtaposition. But it is advisable that we employ our means in a clear order, and according to a consistent plan.

The former requires that we do not arbitrarily cause the beginning and ceasing of a voice-couple, but rather follow the idea of the whole, as we have seen it indicated in our rhythmical construction. The change, therefore, ought invariably to take place at a rhythmical section, as in No. 83, or at least with a rhythmical link, as in No. 82.

The consistency permits no general rule; it can only arise from the contents of every phrase.

With the following Part begins a series of analyzations and exercises which will exclude, for a time at least, all free formation. But we advise the student to keep up the practice of the duophonic, or double duophonic composition, in order to preserve the susceptibility of his mind to melody and rhythm, which will have their turn in future.

Third Part.

The Harmony of the Major Scale.

However diversified our tone-world has been thus far developed, we can clearly see the insufficiency of everything discovered. At first we had the complete diatonic scale, with the license, even, of admitting foreign tones, but we could only move in it monophonically. Afterwards we gained the harmonic masses, and the possibility of combining simultaneously two or four voice-parts; but they were insufficient for the complete scale.

The next step is obvious:

We must learn to use the complete scale in the polyphonous combination of the harmonic masses.

We resume at once, therefore, the polyphonous composition, and begin with the Tetraphonic composition.

CHAPTER I.

DISCOVERY OF THE NECESSARY HARMONIES.

Our first object is now to find harmonies for the complete scale.

Here we are directed at once to the first harmonic mass, the importance and regularity of which we have already seen. This regularity consists in the position of its three tones (*c*, *e*, *g*), which are placed in thirds, one above the other.

The combination of three or more tones to a Harmony is called a "*Chord.*"

The lowest tone in such chord (*c*) is called "*Fundamental tone.*"

It is the most important tone of the chord, because it serves as basis for the whole construction. Therefore the proportions of

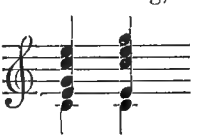
the other tones of the chord are regulated and designated by it. The next note (*e*) is called the "*Third*," and the next one is called the "*Fifth*," *i. e.*, of the fundamental tone.

Already in No. 79 we have perceived that the tones of a chord do not always appear in their original position. The very first mass showed itself in No. 54 in the following manner: first the fundamental note, then the Octave, then the Fifth, then again the Octave, and after that only came the *Third*, and again the *Fifth*.

Doubling of the Chord-tones.

At the same time we see that every note of the chord can be applied more than once; either in different octaves (as in No. 54), or (as can easily be imagined) by different voices on the same place. Both proceedings are called "*Doubling*" of the chord-notes.

We shall require this doubling of chord notes immediately; for we intend to write tetraphonic, and have but three tones in the chord. Which of these three tones shall now be doubled? We are at liberty to double either, and shall make use of this license. But, if no other reason prevent us, we shall double the fundamental tone *first*, because it is the most important tone of the chord, and Nature itself has used it oftenest (No. 54). After this we shall double the *Fifth*, because it appeared originally twice. The Third, which originally appears but once, is the least appropriate to be doubled. We have based this rule upon imitation of our natural formation. Our ear confirms this as the most beautiful and regular concord, and the Third as the most piercing and perspicuous interval of the chord, which in doubling, for instance,

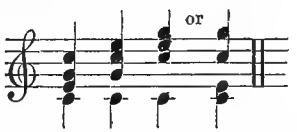
84. 

easily drowns the other intervals.

Transposition of the Chord Tones.

We have already seen that the tones of a chord appear by no means always in their regular position. In No. 79 we have even voluntarily resigned it. But these transpositions require, for the

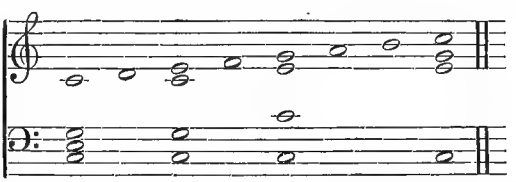
present, no particular consideration. We will now place our tones as near as possible to the upper voice, unless particular reasons lead us to a different formation; but the fundamental tone shall always retain its original position as the lowest tone, because it is always the basis of the chord, and by it we can easiest recognize and designate the chord. But since we can place all our other tones at pleasure, the Octave, Third, or Fifth are placed occasionally in the upper voice.

85. 

We will call these different placements of the Harmony, "*the position of the chord.*"

Thus much of the first harmonic mass. The second harmonic mass contains also three tones, but not in regular succession; it can, therefore, in its present form, give us no chord.

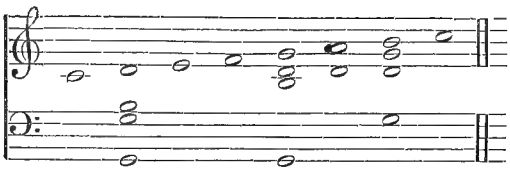
Let us now see what application this one chord permits us, to which tones of the scale it can be used as harmonic.

86. 

Only to those tones which are contained in it: to *c*, *e*, *g*, and *c*. We place the fundamental tone always on the lowest place, and the other tones as near as possible to the upper voice; thus doubling the fundamental tone always by its octave.

Where do we find new harmonies for the other tones of the scale? Let us return to our second mass. This second mass was not as regular as the first, yet we have already used it as a first mass, *viz.:* in the half-cadence of a thesis, or a first part, by leaving out its third tone. We will add now to that formation (*g*, *d*) a Third, *viz.*, *b*, which exists under any circumstances in our present material—the Scale—and we have a regular chord of three tones, *g*, *b*, *d*, resembling that of the first mass, and assisting us to accompany again a part of the scale.

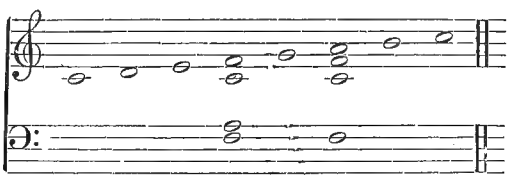
87.



Here, too, we have placed our chord tones as near as possible to the upper voice.

The same chord might also have accompanied the fifth tone of the scale, if this tone had not already received a chord of the first mass as accompaniment. *F* and *A* are now the only unaccompanied tones remaining. Let us merely attempt an accompaniment as we did in the discovery of the second harmonic mass. We unite *f* and *a*, and add to it the third tone, *c*, and thus gain a third chord, which is formed like the former chords, and can serve us as accompaniment to the tones *f* and *a* of the scale.

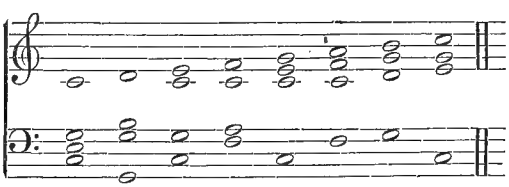
88.



We might also use this chord as accompaniment of the first tone, *c*, if it had not been occupied already by the first chord.

We have now achieved our nearest object: all the tones of the scale are provided with harmony.

89.



Before we enter, however, any further upon these results, we must examine our three chords more closely. It is still the question whether the chords *g-b-d* and *f-a-c*, are as apt and useful as the chord of the first mass.

The three chords are exactly alike in all their proportions. They consist each of three tones: the fundamental tone, its third,

and its fifth. The third in each is a major third, and the fifth in each is a perfect fifth. The chords on *f* and *g* are therefore perfectly like the one on *c*.

But we know already, from the Introduction, that we can build a major scale upon every tone of our whole system, and that all major scales have like proportions. Consequently the chords upon the Tonic of every major scale must be exactly alike. We can therefore find our chords *f-a-c*, and *g-b-d* on the Tonic of *F* and *G* major, though they are also domesticated, as it were, in *C* major. We can consider these two chords as reminiscences of *F* and *G* major, or as *borrowed* from those keys. These keys stand to the one in which we actually are (*C* major) in the first degree of relationship*; and thus we come to the conviction that the harmony of the major scale consists of the tonic chord of the same, and of the tonic chords of the two nearest related major scales.

Therefore: as every major scale has its nearest related major scales on the nearest fifth above and below the Tonic; thus has each major scale also, besides its own tonic chords, the tonic chords of the nearest related major scales within it.

This double point of view which we have taken of our second and third chords:

1, as harmonies constructed from *domestic* tones (tones belonging to the scale);

2, as Tonic chords of the two nearest related major scales, which we have borrowed from these, and which remind us of them;

will, in future, be of the greatest importance. We must comprehend it clearly, therefore, and retain it.

* Nearest related or related in the first degree, are such major keys as deviate in but one tone from each other. *C* major and *G* major; for instance:

c, d, e, f, g, a, b, c.
g, a, b, c, d, e, f♯, g.

differ from each other merely in the *f* and *f♯*. *C* major and *F* major:

c, d, e, f, g, a, b, c.
f, g, a, b♭, c, d, e, f,

are distinguished merely by one ♭, consequently they are nearest related. In the quint-circle, *G♭, D♭, A♭, E♭, B♭, F, C, G, D, E, A, B, F♯*, the nearest-related keys are at each side of any particular one. Of course, the more two keys deviate from each other, the less are they related.

CHAPTER II.

EXAMINATION AND JUSTIFICATION OF THE HARMONY.

A.—*The Four Voices.*

We return now to our last harmonic formation, No. 89. Formerly we had directed our attention merely upon the chords which existed in it. We will now look at it from another point of view.

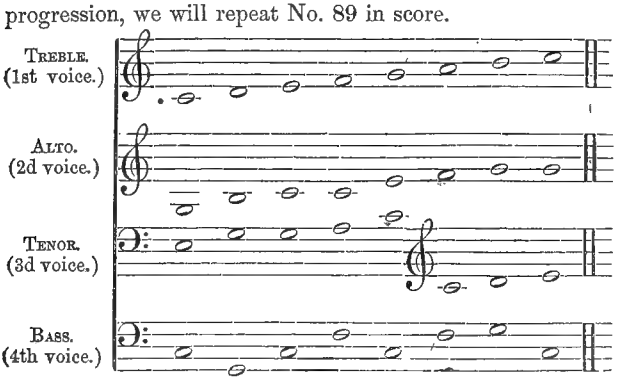
We began with the scale which as first tone-chain or "voice," we placed highest. Each tone of this scale has first one, then a second, and then a third tone under it. When we now consider all the first (*c*, *d*, *e*, &c.), all the second (*g*, *b*, *c*, &c.), all the third (*e*, *g*, *g*, &c.), and all the fourth (*c*, *g*, *c*, &c.), as separate tone-chains, we find a phrase of

Four simultaneously-sounding voices.

These four voices are called

Treble (Soprano)	or first voice.
Alto	or second voice.
Tenor	or third voice.
Bass	or fourth voice.

In order to recognize distinctly the different voices and their progression, we will repeat No. 89 in score.



The highest and lowest voice (Treble and Bass) are called "*outer voices*," the other intermediate voices (Alto and Tenor) are called "*inner voices*."

B.—*The Connection of Chords.*

But it is not sufficient that each chord by itself should be well formed; *together* they ought to form a *harmonic whole*, as the scale became a melodic whole. They must have *connection* and *unity*.

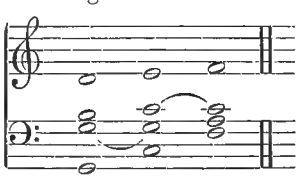
Is this the case in No. 89?

A superficial unity exists already in the fact, that all the notes of these harmonies exist in one and the same scale. But this is not sufficient, for we know that our second and third chords are merely borrowed from other scales.

A more distinct tie exists in the *connecting notes* which each of our chords has in common with its neighbors. Thus we have seen that our two harmonic masses were connected by a mutual tone, *g*, and thus are here our first, second, and third chords connected by the mutual *g*,—the third, fourth, fifth, and sixth chords by the mutual *c*,—the seventh and eighth again by the mutual *g*. *Between the sixth and seventh chords only this connection is wanting.*

The connection of the second, third, and fourth chords is best perceptible in the following:

90.



Again, the three important notes,

g—c—f,

of page 55 meet our eyes, and again we find our Tonic *c* as the centre which connects these chords, and around which they move. But they are no longer the single notes of a scale; they are the harmonies from which our whole harmonic development is derived.

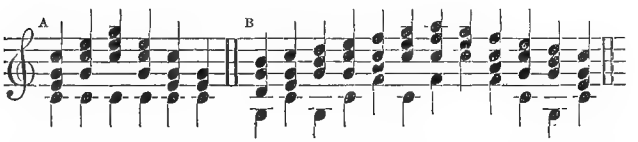
C.—*Harmonic Designs.*

Before we return to our subject (connection of chords) we must

take into consideration the harmonic designs which we have discovered thus far. There are two:

A, the progression from one position of a chord to another;
B, the combination of two chords which stand to each other in the relation of tonic and dominant harmonics.

91.



The chords of the Dominant and the Subdominant (f) have no connection with each other.

This cannot well be otherwise, for we know that these two chords have been borrowed from keys which, though each related to the principal key, C, have no connection with each other.

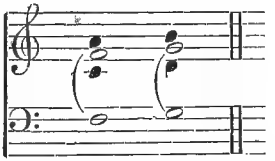
D.—*Faulty Progressions.*

Examining the deficient progression from the sixth to the seventh degree, we find still more undesirable proportions.

1.—OCTAVE-SUCCESSION.

Firstly: each of our four voices takes throughout an independent path; in the beginning, the first goes from c to d and e; the second from g to b and c: the third from e to g, which latter is repeated; the fourth goes from c to g, and back to c. Only from the sixth to the seventh degree, bass and alto proceed from f to g.

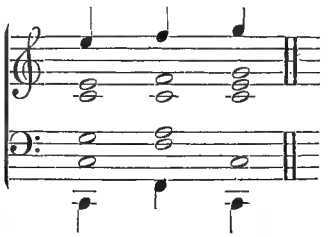
92.



The alto says nothing different from the bass. Neither is it a mere doubling or strengthening, as we have seen it in our first attempts at duophonic composition (No. 49); for it is right in the midst of the other parts, and, like them, claims to be a separate voice. In this very ambiguity lies the fault; the alto is neither

a separate voice nor a mere doubling, as, for instance, in the following:

93.

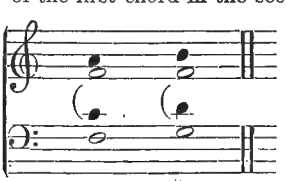


Progressions like those of alto and bass in No. 92, are called *false* or consecutive octaves; they give to the phrase an ambiguous appearance, sound hollow from the tone-web, and rob it of its full variety of voices. For the present we will absolutely avoid them, though the time will come when we learn to make the right use of them.

But how can we obviate the consecutive octaves in No. 92?

The bass was indispensable: we had for *a* and *b* no other harmonies than the chords of *f* and *g*. The fault, then, lies in the alto, because the alto, like the bass, proceeds from *f* to *g*; this must not be. We now remember that the chord *g-b-d*, is in reality nothing else than our former second mass, *g-d-f*. We might therefore retain the *f* of the first chord in the second chord;

94.



The alto progresses no longer in octaves with the bass, and these two chords have now a mutual connecting-note, *f*.

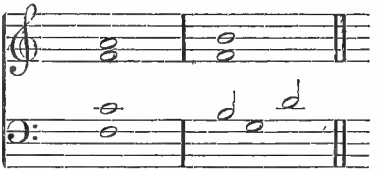
2.—QUINT OR FIFTH-SUCCESSION (CONSECUTIVE FIFTHS.)

But there is another misproportion in this place. Two voices progress simultaneously in fifths, *i. e.*, make consecutive fifths. We see that tenor and bass form a fifth in the first chord, as well as in the second, and we experience from it the same hollowness of sound which we discovered in the consecutive octaves. This mis-

proportion is particularly obnoxions when it is unhidden by other voices; as, for instance, in No. 94, with alto or treble left out.

In future we shall find these successions sometimes admissible; for the present we will avoid them. In the above case the fault consists in the progression of bass and tenor. The bass goes from *f* to *g*, while the tenor goes from *c* to *d*. In the octaves we avoided this fault by letting the first note of the tenor remain; here, it is clear that the *c* cannot remain, for it forms no part of the succeeding harmony. But if it can neither ascend nor remain, it must absolutely go down into the nearest note of the next harmony (*b*). But the note *d* is now wanting! let us distribute, therefore, the time-space of the chord between *b* and *d*.

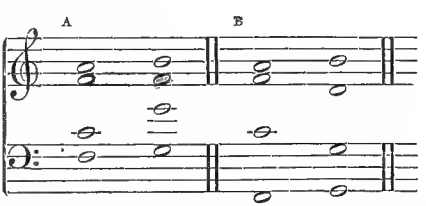
95.



We have now avoided the fifths, and gained, besides, the complete harmony. The former we have gained by contrary motion, the latter has given us opportunity to give to one voice two notes of the same chord, and thus to obtain greater animation. We will call such notes, which enter after the other notes of a chord, "*harmonic bye-notes.*"

There are many other ways of obviating the above difficulty, as, for instance, at A and B;

96.



but for the present we will adopt the one illustrated in No. 95, because it is within bounds of our present knowledge.

E.—*The Dominant Chord.*

This has involuntarily led us to a new chord, consisting of *four*

notes: g, b, d, f. The fourth note is the seventh of the fundamental tone.

We will call our former chords, consisting of three notes, "*Triads*," of which we have at present three; *viz.*,

Triad of the Tonic,		*c-e-g;*
"	" Dominant,	*g-b-d;*
"	" Subdominant,	*f-a-c.*

The chords of four notes will be called chords of the Seventh, or "Septime chords," because the added seventh distinguishes them from the triads. The one we have just now discovered upon the Dominant, will be of special importance, and to distinguish it from others, less important, we will call it the "*Dominant Chord.*"

This Dominant Chord requires a more particular explanation.

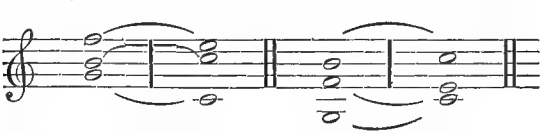
1. It exists on the Dominant of each key, and at no other place.

2. The dominant chord of each key exists in no other key Consequently, this chord is the one which most distinctly marks a key. Thus the chord *g-b-d-f*, indicates at once the key of *C*. In the key of *F* it would be *c-e-g-b♭*, in the key of *G* it would be *d-f♯-a-c.*

3. This chord reminds us of the second mass, and with it, the Tonic and the around-it-moving scale. It is the completion of that which was merely indicated in former formations:

G, a, b, C, d, e, F.
G, — — — D, — F.
G, — B, — D, — F.

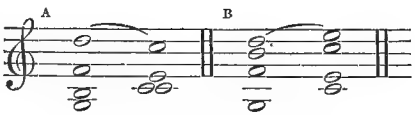
Its destination is; to resolve into the first mass, and all its notes follow this current. Its fundamental note goes to the Tonic, its third leads to the Tonic; its seventh leads towards the Tonic, and enters upon the note of the tonic harmony in its way;

97. 

its fifth goes most naturally to the Tonic, though the tonic third is quite as near. But we prefer the former, because we do not

like to double the third. No. 98 A is therefore better than No. 98 B.

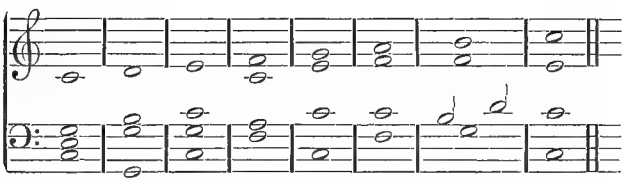
98.



This proceeding of the dominant chord is called its "*resolution*," and of any chord that absolutely draws after it another harmony, we say, "*it resolves into*" such chord or harmony.

With this we have at last accomplished the *faultless* harmonizing of the scale.

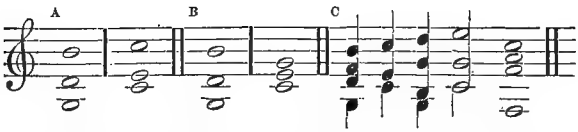
99.



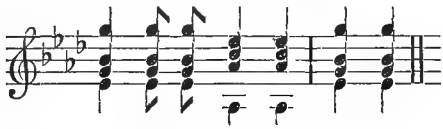
It is a natural consequence of the regular resolution of the dominant chord, that the last chord remains *incomplete;* it lacks the fifth. We will submit, for the present, to this imperfection; it is not disagreeable, and will soon be justified or avoided. It seems, further, as if there were now no connection between the two last chords, *g-b-d-f*, and *c-e*, they have in No. 99 no mutual tone. But this is only because the last chord was incomplete; the connective-tone (*g*) exists, but we have not been able to introduce it, because each of our voices had to follow a certain prescribed direction.

F.—*The Triad of the Dominant submitting to the rules of the Dominant Chord.*

We have given, above, the most natural progressions of the dominant chord. Their current, and particularly that of the third, is so strong, that it actually drags the dominant-triad along with it. Whenever the latter is succeeded by the tonic triad, we prefer leading the third up into the Tonic (A) to leading it down into some other tone (B).

100. 

We involuntarily consider the dominant triad as dominant chord, and feel in a degree the effects of the seventh, though it is not heard. We have the same sensation when the tonic triad with its third as the highest note goes into the Subdominant triad (c). An exception will illustrate this rule still better. HANDEL often leads the third of the dominant triad downwards; for instance, in a chorus from "Israel in Egypt:"

101. 

and thus obtains a strange, piercing expression, which makes it perceptible that he departs from the natural way. This is by no means the only instance of great masters deviating from any given rules. Music as an art would be fettered indeed if her devotees were confined to the rules laid down for the guidance of the student. The master knows well when a deviation is admissible or inadmissible; and his taste and intelligence are the only judges whom he has to consult. Thus can we see numerous illustrations of the above in the works of Haydn, Mozart, Beethoven, Mendelssohn Bartholdy, and a hundred others. But they are the masters; we, the students, true to our principle, without calling this deviation wrong, will at present abstain from using it.

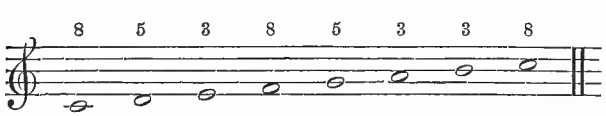
CHAPTER III.

THE ACCOMPANIMENT OF GIVEN MELODIES.

A.—*Limitation to those means which were found in the Ascending Scale.*

Our melodies, for the present, will have to be very simple and contain the notes of but one major scale. To each note of the melody we give that chord which we have found for it in No. 89, *viz.*, to the first, third, and fifth tones of the scale we shall always give the tonic triad; to the second and seventh that of the dominant; and to the fourth and sixth the triad of the subdominant. But when the sixth note is succeeded by the seventh, we shall avoid the threatening faults by the introduction of the dominant chord.

In order to facilitate the finding of the chords, we shall indicate by figures how far below the fundamental note of the chord is to be found. We have seen in Nos. 89 and 99, that the Tonic has for a fundamental note the lower octave, and mark it therefore by 8, above the melody. The second note of the scale (*d*) has its fundamental notes five degrees below; we mark it by 5. According to this proceeding the scale of *C* major would be marked thus:

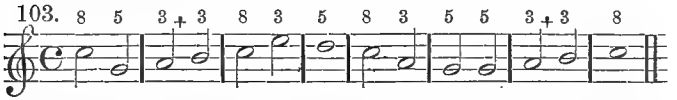
102. 

We see that the figures 8, 5, 3 are regularly repeated, with the exception of the sixth and seventh degrees, which are both marked by 3. It is the same point where we have discovered the different misproportions in the progressions of our chords. We will, for the present, mark it by †, in order to remember the avoiding of consecutive octaves and fifths, and the strengthening of the connection.

After this we find and place the fundamental notes, and then the middle voices. As example we give the following:

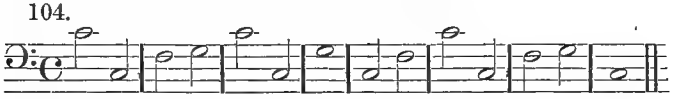
This melody:

103. 8 5 3 + 3 8 3 5 8 3 5 5 3 + 3 8



has first been provided with figures. We have also remembered the dangers by placing a † where we are likely to encounter them. Then we write the fundamental tones;

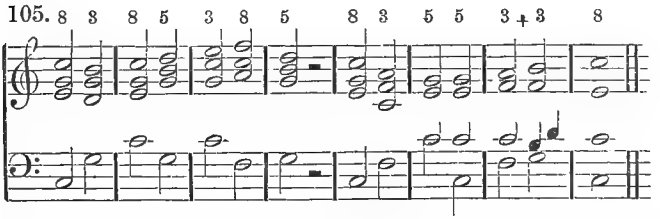
104.



Why does the bass in the first measure descend an octave instead of remaining on the same *c?* Partly in order to animate the somewhat monotonous movement of the whole, and partly in order to obtain a more decisive direction from the lower *c*, past *f* and *g*, to the higher *c*.

Finally we add the middle voices, always as near as possible to the upper voice, and avoiding, at †, the consecutive octaves and fifths.

105. 8 8 8 5 3 8 5 8 3 5 5 3 + 3 8



In the sixth measure, tenor and bass meet on the same tone. But it is easily perceived that, nevertheless, the two voices have a different progression. But if we were to unite them repeatedly in succession, we would reduce our phrase for the time to a triphonic one. Not that this is wrong, but it is a deviation from our object.

Much more important is the following observation upon

the Half-Cadence

which we have made in the fourth measure. Our composition

appears to us as a Period, with thesis and antithesis. We have always ended our thesis with a half-cadence, or a step from the first into the second mass; *i. e.*, from the tonic triad into the dominant triad. But *here*, the tone *f* of the melody does not permit the tonic triad, *c-e-g*. We have therefore seized the next important chord, "the triad of the subdominant," and have gained

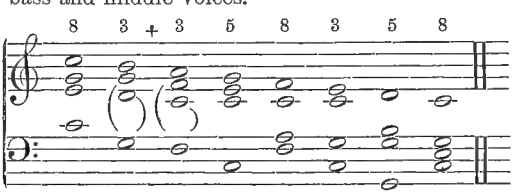
two forms of the Half-cadence.

The one consists of the step from the tonic triad into the dominant triad; the other of the step of the subdominant triad into the dominant triad.

B.—*The Descending Scale.*

We will now attempt to find an accompaniment for the descending scale, in the same manner as the ascending one. We place our figures above the upper voice, and in accordance with it we find bass and middle voices.

106.

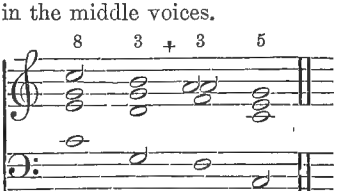


Everything is right with the exception of that dangerous step from the seventh to the sixth degree (*b*—*a*), where, again, all connection is wanting, and where we meet as heretofore with consecutive octaves and fifths.

It is clear that the dominant chord can aid us no longer. It is not even applicable without falling into new faults. For if we were to change *g-b-d* into a dominant chord, *c-e-g* would have to follow, and *b* would have to go to *c* instead of *a*. We must find other means.

In order to avoid consecutive fifths and octaves, we will attempt contrary motion in the middle voices.

107.

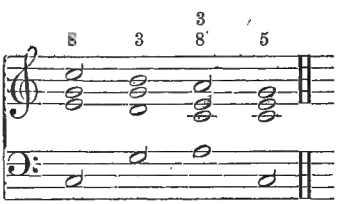


The alto would have to ascend to *a* and meet with the treble, and the tenor would have to take *f*. But this would render the chord incomplete, and tenor and bass would make consecutive octaves from the third to the fourth chord (page 101).

The Major and Minor Triad.

A second attempt can therefore only be made with the bass itself. It is because the bass follows the downward direction of the middle voice, that the faults come into existence. The bass must therefore *ascend to a*. Trusting to chance we construct upon this new fundamental tone a triad.

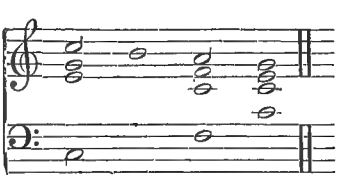
108.



We have deviated from our rule, and must therefore mark the chord by 8 instead of 3. Consecutive octaves and fifths are now avoided, but we lack the connection of this new chord with the preceding one by means of a mutual tone.

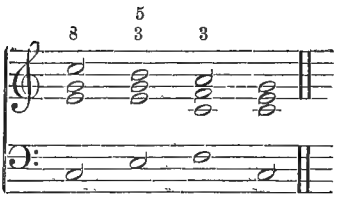
This improvement leads us to a third attempt. Suppose we were to retain the *f*-triad which we resigned just now? In that case the alteration would have to take place in the preceding chord. The following would be an illustration of our present position:

109.



If we considered *g* as the fundamental tone of the second chord, we should fall back into the old fault of No. 106. We must therefore choose a fundamental tone which ascends to *f*. This would be *e*, and upon it we construct a triad, as we have already done on *a*.

110.



Here, too, we have altered our figures, avoided the wrong progressions, but lost the close connection of the chords. This loss, however, considering the otherwise excellent connection of the chords and the good progressions of the voices, may be easily borne.

Comparing our new chords with the old ones, we find: that though they are also *triads*, their contents (the intervals of which they consist) are by no means alike. The former triads consisted of fundamental tone, *major* third, and perfect fifth; the new ones (*E* and *A*) consist of fundamental tone, *minor* third and perfect fifth. We will call the former *major triads*, the latter *minor triads.*

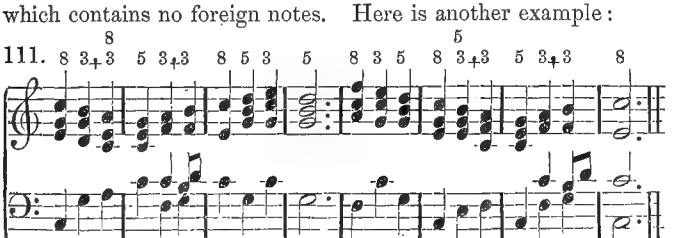
We have now three species of chords, viz.,

1. *Major triads* upon the Tonic, Dominant, and Subdominant—in *C* major, upon *C*, *G*, and *F*.
2. *Minor triads*, upon the third and sixth degrees of the scale —in *C* major, on *E* and *A*.
3. The *Dominant chord*, upon the Dominant—in *C* major upon *G*.

We can now already see one of the reasons which permitted us to leave the triad after the dominant chord incomplete, *i. e.*, without fifth. The third suffices to indicate that the chord is a major triad; the fifth, which is no distinctive mark, can be most easily dispensed with.

With this our actual mission is fulfilled. We can harmonize the scale in every direction, and, consequently, every melody which contains no foreign notes. Here is another example:

111.

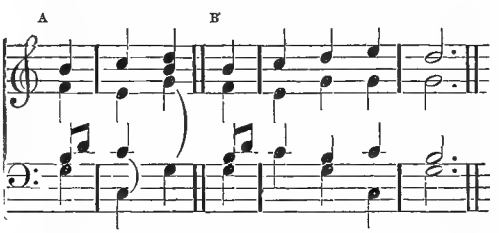


The treatment of the second and seventh measures is the same which we have learned in No. 95, and applied in No. 105. In the sixth measure we have made use of the proceeding in No. 110.

The chords from the fourth to the fifth measure have no connecting tone, but since the connection of the chords is otherwise well-established, we can let it pass.

In the second measure we permit the *d* of the dominant chord to ascend. Why? Because, since the melody ascends, we should have been forced to make consecutive octaves (A) or to use a different progression of the voices (B). Whenever the melody ascends by degrees, we will always use the same proceeding.

112.



In the course of our last remarks we have frequently used the word "note" for "tone." Since there can be no possibility of confusion, we wish them to be considered as synonymes; at least until in a future chapter we shall be forced to preserve the distinction between "tone" and its representative "note."

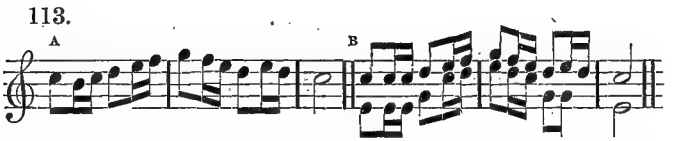
Fourth Part.

The freer use of the chords at present in our possession.

Until now we have used our chords merely for the accompaniment of given melodies. Let us now see how we can apply them independently.

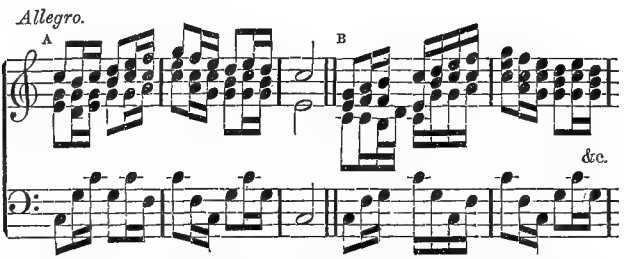
Animated phrases, like those of the monophonic and duophonic compositions (Nos. 5 to 74) would here be out of place. For, at present, we know nothing better than to write exclusively in tetraphonic chords (in masses) and this does not agree with an intellectually-animated movement. A phrase like the following Allegro

113.



will do very well for one or two voices (A or B) but it would be drowned under the tone-mass of four voices, with their bass walking along in wide steps (A).

114.



The addition of a dominant chord would even make it worse (B).

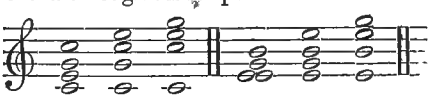
We have to be limited, therefore, to quiet and simple harmonies which develope themselves but slowly.

CHAPTER I.

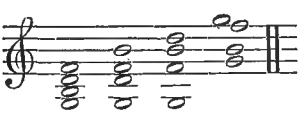
HARMONIC DESIGNS.

A.—*Development of a single chord.*

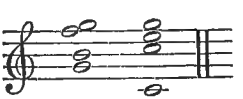
We have already seen chords in different positions (No. 105); among others the major triad of *c*, with either octave, third, or fifth in the upper voice. This leads us to the first design: the leading of a chord through all its positions.

115. 

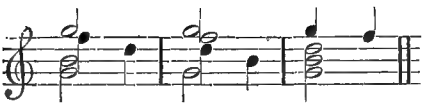
The same proceeding can be applied to every triad, to the dominant chord also.

116. 

At a first glance the design of the last chord seems to be faulty, for we have admitted that the dominant chord must resolve into the tonic triad. But we can soon perceive that the moment of proper progression has merely not yet arrived. The second, third, and fourth chords are merely repetitions of the first, and only the last repetition ought to resolve according to rule.

117. 

We see, also, that the last repetition is imperfect; we have employed two voices for the fundamental tone and its octave, and consequently have but two left for the most important intervals of the chord: the third and seventh. The fifth is omitted, unless we give to one voice two notes in succession, as we have already done at No. 95.

118. 

B.—*The Combination of Major Triads.*

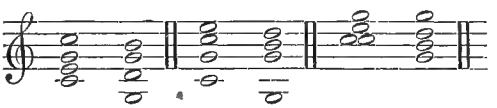
We are in possession of three major Triads, on the Tonic, Dominant, and Subdominant. All these are contained in one and the same key, but the tonic triad alone indicates to us this key. We have borrowed the dominant triad of the key of the Dominant, and we have borrowed the subdominant triad from the key of the Subdominant. Thus, though these three triads belong to one key, they indicate three different keys.

These chords stand in the same relation to each other as the keys. *C* major and *G* major, and *C* major and *F* major are nearest related, consequently the triads of *C* and *G*, and *C* and *F*, stand in the same degree of relation. The keys of *G* major and *F* major do not stand in nearest relation, consequently the triads of *G* and *F* lack also this nearest connection.

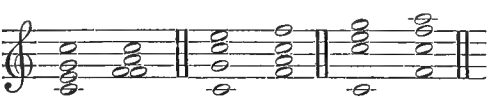
Premising this we find, therefore,

1.—*Designs of Nearest Connection*

which we can represent in all the different positions of the chords, between the triads of the Tonic and the Dominant:

119. 

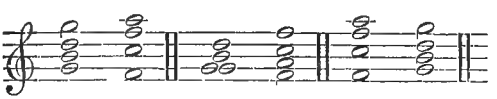
betweeen the triads of the Tonic and the Subdominant:

120. 

&c., &c.

2.—*Designs of More Distant Connection.*

between the triads of the Dominant and the Subdominant, or *vice versa:*

121. 

C.—*The combination of Minor Triads, and of Minor and Major Triads.*

We have found two minor triads, one upon the sixth, and another upon the third degree of the scale. When we examine the scale, we find that we can construct a minor triad upon the second degree also; for instance, in *C* major upon *d: d-f-a.* Thus we have now three major triads; upon the first, fourth, and fifth degrees; and three minor triads: upon the second, third, and sixth degrees of the scale. Upon the seventh degree we can construct neither major nor minor triad, for the perfect fifth is wanting.

It is now the question what independent use we can make of these chords, of which, till now, we have used but two, and these only from necessity.

In order to arrive at the solution of this question, we must first examine their relation to each other.

It is clear that all the notes belong to one and the same key, and that some have mutual notes among them, others not. The triad of *C* is thus related with those of *f*, *g*, *e*, and *a*; each of the remaining chords is only related with *three* others by means of mutual notes.

As the three major triads represented the three major keys, thus the three minor triads represent three minor keys, which on examination will be found to be the parallel keys* of the above three major keys.

Each minor key, however, stands in the first degree of relation to its parallel key (they differ only in one note); consequently, *C* major and *A* minor, *G* major and *E* minor, *F* major and *D* minor, are nearest related, and thus the triads of

the first and sixth,
the fifth and third, and
the fourth and second degrees

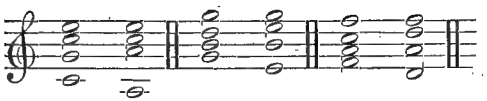
belong together.

We have, therefore, again,

1. *Designs of nearest connection*, or such as are connected by the relation of the keys they represent.

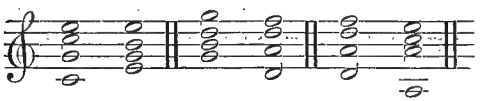
* Parallel keys are those major and minor keys having the same signatures; for instance, *C* major and *A* minor, *G* major and *E* minor, *F* major and *D* minor.

122.



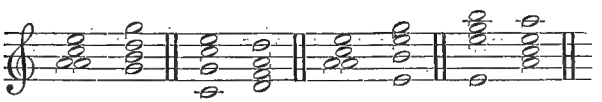
2. *Designs of more distant connection*, or such which, though having mutual notes, do not represent nearest-related keys.

123.



3. Designs without mutual notes.

124.



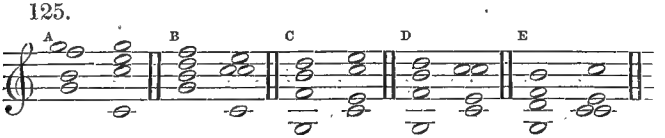
D.—*Harmonic Designs from the adding of the dominant chord.*

Till now we have used the dominant chord only in order to avoid faulty progressions. We will attempt, now, to use it independently. As such it meets us in a very important relation:

1.—*The Dominant chord preparing the end.*

The dominant chord, as we know already, is the best decisive sign of a key, and according to its nature resolves into the tonic triad. In connection, therefore, with the latter, it serves as the most decisive cadence. Let us observe now how in its four positions it resolves into the tonic triad.

125.



In A the last chord appears with its fifth in the upper voice. In B the third is above. Such cadences are imperfect; they are only perfect when the final chord has the Tonic in the upper

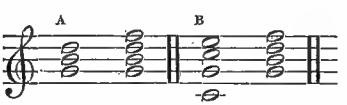
voice. In the above cases we could not well do differently, therefore whenever in the dominant chord the octave or third are in the upper voice, we shall have an imperfect cadence.

If it is in the upper voice, it can either ascend into the third of the tonic triad as in (C), or it can descend, as in (D), into the octave of the same. In the first case we have again an *imperfect*, in the second, a *perfect* cadence. Finally, when the third of the dominant chord (as in E) is in the upper voice, we obtain, again. a perfect cadence, aud a stronger and a more satisfactory one than in D; for the third *must* ascend into the octave, while the fifth can either ascend or descend.

2.—*Other Chords in connection with the Dominant chord.*

The nearest relation of the dominant chord is the dominant triad

127.



(A) which by adding the seventh becomes a dominant chord. The next is the tonic triad (B), on account of its intrinsic connection with the dominant chord.

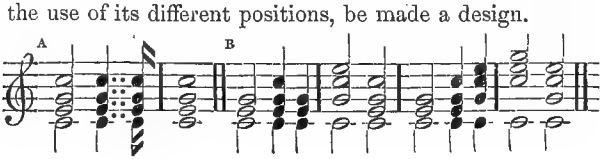
After this, all the remaining triads (with the exception of the one on the sixth degree) stand in close connection to the dominant chord, thus making this chord the animating agent of all our harmonies.

128.

E.—*Extension of the Harmonic Designs by means of Rhythm.*

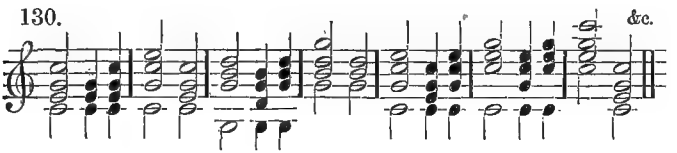
Every chord, or every pair of connected chords, can serve us according to the above, as harmonic design; and consequently every harmonic design can, by means of rhythm, be carried out. Thus a single triad could, by means of rhythmical repetition (A), or by the use of its different positions, be made a design.

129.



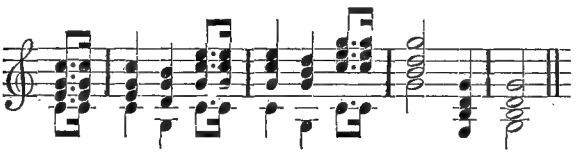
The same could be done with two or more connected chords; for instance,

130.



or alternating chords might be led through their different positions, as in No. 119, if we wanted to employ all the chords in one phrase; or they might be employed as here:

131.



in various rhythmical forms.

Such formations are to be effected so easily that they require no further instructions.

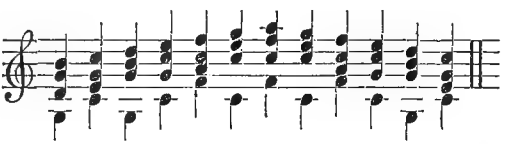
Far more important is

F.—*The Formation of Harmonic Passages or Sequences,*

as they might better be called here.

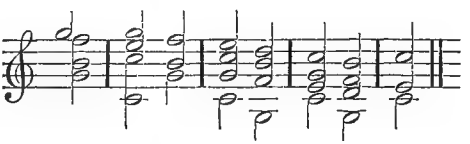
Every succession of chords which does not end in the manner of a period or a phrase, is called a *harmonic Sequence.* Thus the following part of a harmonized scale,

132.



might already be called one. No. 126 gives us another, consist

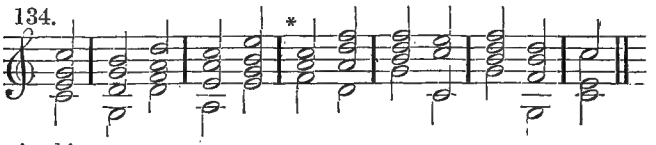
133.



ing of the dominant chord and the tonic triad with their positions. The design of No. 119 gives us a third and fourth. We connect

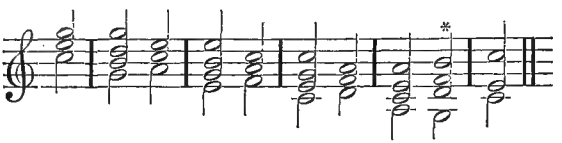
the tonic and dominant harmonies, and write the bass, perhaps, in this manner:

134.



or in this:

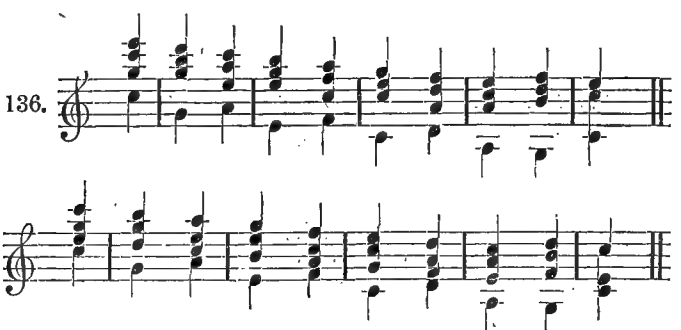
135.



as far as it is convenient (the * marks the point where we are forced to leave the design), and effect the end by means of near-related chords.

The formation of such sequences is absolutely necessary to the student, who should practice them in all positions and in all keys, perhaps in the following manner also:

136.

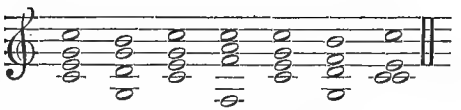


Such designs and sequences receive a special destination, when as

Prelude,

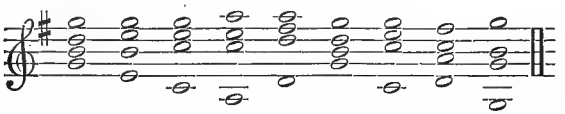
they serve as introduction to a key, or the performance of a composition. These introductions, perhaps intended as preparation for a singer to begin on the right note, &c., can be limited to the simple tonic harmony, or a connection of tonic and dominant harmonies in their different positions. More complete would be the combination of tonic, dominant, and subdominant harmonies,

137.*

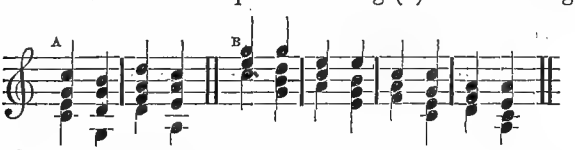


or the addition of minor triads; for instance,

138.



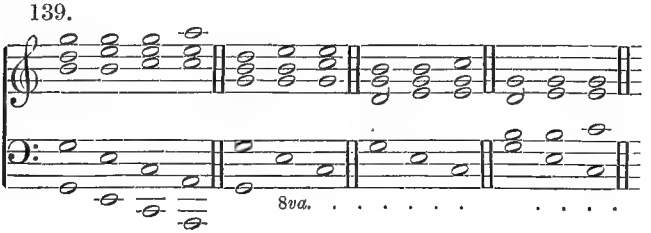
Each design can be the germ of greater formations. The combination of the tonic and dominant triads, for instance (119), can be continued through all positions; it can be repeated; it presents to us the appearance of two triads whose fundamental tones are a fourth distant from each other. Are there not other triads of this kind? We will attempt it ascending (A) or descending (B),



as we have already done in No. 136. Let us continue each design through all positions, and it will make us more at home in our harmonic means. The number of such designs is great, and the practice recommended of the greatest use in our future exercises.

* We must remark that here, and in most of the following illustrations we have contracted our examples on one stave, thus impairing their effect. But the pupil should practice and write them with lower basses, or in lower tone-regions, and double the former; for instance, instead of No. 138 he should write thus:

139.



CHAPTER II.

THE FREER HARMONIZATION OF GIVEN MELODIES.

We have formerly said that the third, fifth, octave, or seventh of any chord can be laid in the upper voice. Let us now reverse it, and say that

Each tone of a melody can be either third, fifth, octave, or seventh of a chord.

Until now we have had a choice of harmony for but two degrees. In descending the scale, for instance, *C* major, we could take for *b* the triad of either *g* or *e*; or for *a* the triads of either *f* or *a* (108 and 110). But it is our object now to choose our chords. In order to secure safety we will divide our material.

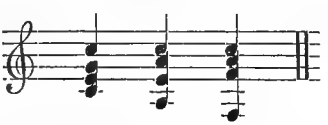
A.—*Freer use of the Triads.*

We ascertain first of every tone of the scale whether it can be third, fifth, or octave of any of our triads.

The first tone, *C*, can be:

1. *Octave;* in that case the fundamental tone would be *c*, and the chord would be *c-e-g*.
2. *Third;* in that case we have to seek the fundamental tone three degrees below. This would make it *a*, and the chord would be *a-c-e*.
3. *Fifth;* we have now to seek the fundamental tone five degrees below; consequently it is *f*, and the chord *f-a-c*.

Thus we can take to *C*, which was formerly always accompanied by *c-e-g*, three different chords.

140. 

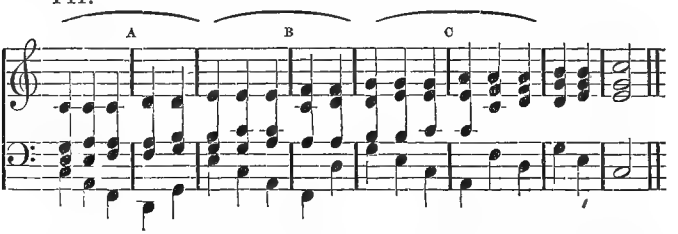
The second tone, *d*, can be

1. *Octave;* which would make the chord *d-f-a*.
2. *Fifth;* and the chord would be *g-b-d*.

We cannot consider it as *Third*, because this would give us the fundamental tone *b*, and the chord *b-d-f*. But until now we have had no such chord, for all our chords have major fifths, while this has a minor fifth.

A continued examination gives us the entire tones of the scale, with their respective harmonies at present known to us.

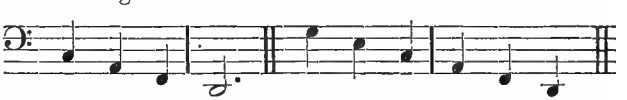
141.



Each tone has received three chords as accompaniment. *D* only could not be used as third, nor *f* as fifth, nor *b* as fundamental note, because this would have given us the chord *b-d-f*, which, for the present, we do not know.

Accidentally, this phrase gives us a new design. We see at A four, at B and C six triads whose fundamental tones form a design like the following:

142.



But to return to our work. Let us attempt the second kind of harmonization. We are no longer tied to those chords which were formerly indicated by figures above the melody, but at every note we ask: "what chord agrees with it?"

But with every chord we introduce we have to ascertain whether in relation with the preceding or succeeding chords it does not cause faulty progressions.

It will be best to write now every chord at once complete, in order to have the progression of every single voice in view. We will also, as much as possible, give the same notes to the same voice if they shonld happen to occur in two successive chords; while we shall give every new tone to that voice which can reach it most conveniently.

By this the movement of our voices will be surer and more quiet.

The advantage of this new mode of treatment is most perceptible in those melodies in which many tone-repetitions occur. These (as in A) cause repetitions of chords, and make the accompaniment monotonous, while the new mode (B) gives variety to it.

A

143.

B

Below we give some melodies on which this new mode can be practiced.

144.

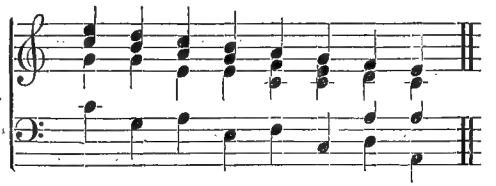
145.

146.

But the student's object ought not to be so much to introduce as many chords as possible, as to avoid troublesome repetition. He should first think of the nearest-related chords. After this, such successions as carry a harmonic or melodic de-

sign consistently through, deserve the most consideration; for instance,

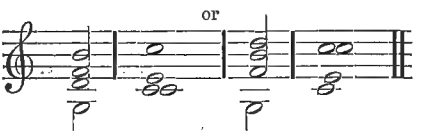
147.



Finally, he must take particular care that these novelties do not destroy the forms of phrases or periods.

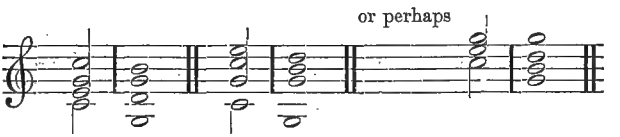
In this respect we know that every phrase and every period has to end with a perfect full cadence; for instance, in *C* major, with

148.



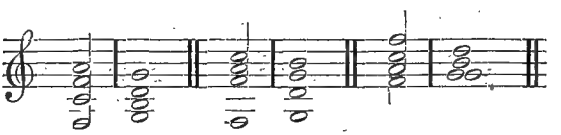
further: that every thesis has to end with a half-cadence, like

149.



or with

150.



These rules must still be respected, and in No. 143 we find them attended to in A as well as in B.

After the harmonization is thus completed, it will be well to ascertain whether, with the introduction of the new chords, faulty progressions have not found their way into it, and after this, the whole should be played through.

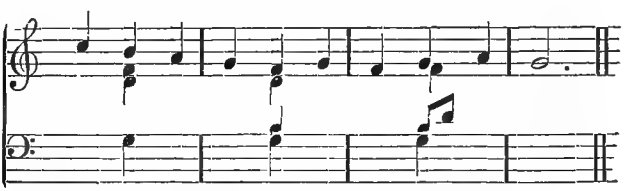
B.—*The free introduction of the Dominant Chord.*

But little remains to be said. Like every triad, the dominant

chord can be used for every note contained in it; but care must be taken not to cause faulty progressions by it.

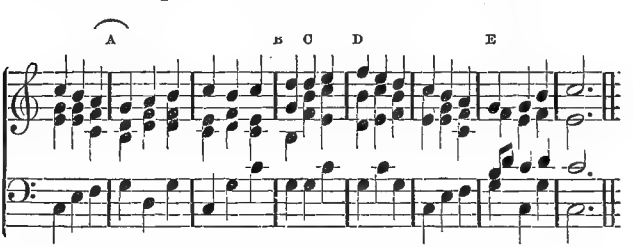
We know that the dominant chord must resolve into the tonic triad; that the third ascends one step, and that the seventh descends one step. We can therefore introduce it only where all these conditions can be fulfilled. Thus it would be wrong, in the following phrase, to consider the *b* of the first measure as third, or the *f* of the second measure as seventh, or the *g* of the third measure as octave of the dominant chord.

151.



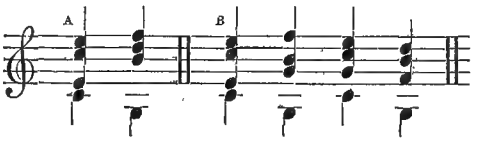
Let us now attempt another harmonization of No. 111.

152.



The three chords at A have little or no connection; they have only been selected in order to have the dominant chord succeed the triad of *d*. The two are related through *d* and *f*; at E we see it succeed the triad of the subdominant, with which it is related through *f*. At C it is introduced to *d*. The melody ascends from *d* to *e*, and the seventh of the dominant chord descends to *e*. Thus the succeeding triad has two thirds which are very perspicuous, and lacks the fifth. The latter is not of much importance, and against the double third we have at present no help. We could have avoided this if it had not been our object to introduce the dominant chord as often as possible. At D we see the advantage of our new principle. We have not placed the middle voices in closest proximity to the upper voice, but have preferred to give them the nearest interval of the next chord, because the for-

mer proceeding would have caused an inconvenient progression of the voices (A).

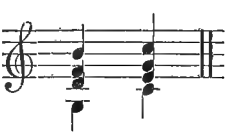
153. 

Still more convenient would have been the progression of B, though by it we should have lost the fifth of the dominant chord. Thus much of the dominant chord. We will make it a rule to effect our full cadence by it.

Freer treatment of the Dominant Chord.

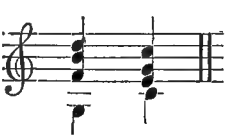
Until now we have always treated the dominant chord strictly according to rule. The consequence was, that the tonic triad after it, invariably lost the fifth. Now, when we have to use it more frequently, and particularly for our cadences, we can permit some slight, imperceptible deviations from our rules.

Formerly we have insisted upon the seventh descending one step; we will now occasionally permit ourselves (particularly when the seventh is in one of the middle voices, and another voice takes the tone into which the seventh ought to resolve), to let the seventh ascend.

154. 

Here the seventh, *f*, goes to *g*, but the tenor has the *e* which ought to have succeeded the seventh in the alto; this deviation, however, is hidden, and we have gained by it a complete final chord.

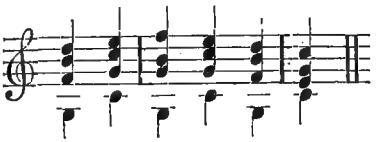
The third ascends one degree. Here we see it descend two degrees;

155. 

but the tone *c*, into which the third would have led, is already

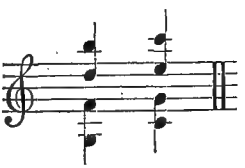
taken by the treble, and we gain, by this slight deviation, the completeness of the second chord.

156.



This deviation, however, is not so admissible when the tone into which an interval of the dominant chord properly resolves lies not alone in another voice, but in another octave also.

157.



Here the seventh in a middle voice ascends also. But the deviation is not hidden, because the voices are too far apart, and the *e* which we expect in the alto is given to another octave.

DOUBLING OF INTERVALS IN THE DOMINANT CHORD.

The intervals of the dominant chord most proper for doubling are,

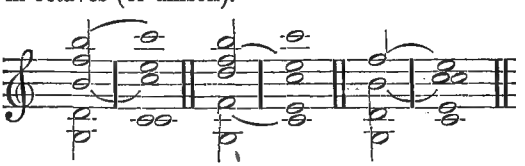
1, the fundamental tone, and

2, the fifth; but,

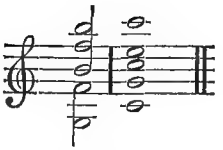
the third and seventh cannot be doubled without falling into faulty progressions. For we know that both intervals have a regular progression; the third ascends a degree, the seventh descends a degree.

If, now, two voices take the third or seventh, both will have to resolve in octaves (or unison).

158.



unless we proceed against the nature of the chord and have it thus:

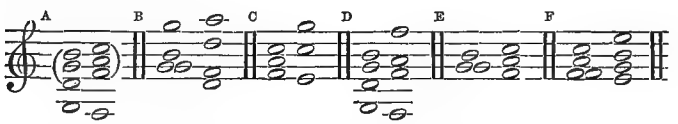
159. 

We have to mention here a relation which, in the old school, has created much confusion and trouble. We refer to the progressions which as

COVERED FIFTHS—COVERED OCTAVES, &c.,

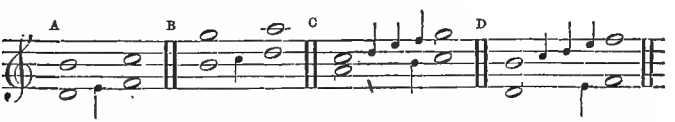
were more or less strictly forbidden.

Two voices can progress in such manner, that without actually making consecutive fifths or octaves, they still produce the same effect; for instance,



It is undeniable that at A, E, B, and C, the fifths *f—c*, *d—a*, and *c—g* are somewhat conspicuous; likewise at D and F the octaves *f—f*, and *e—e*.

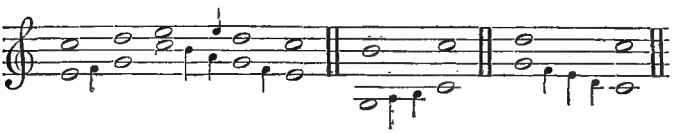
Whenever such fifths or octaves appeared in voices which proceeded in the same direction, they were called "covered fifths or octaves," and the misfortune was said to consist in the fact, that the faults were not in those tones which were actually sounded, but in those which were merely passed. The above instances would be understood in this manner :—



it was said that (A) not the sounded note *d* with *b* made the fifth, but the tone *e*, which is between *d* and *f*, and which, though not audible. could be imagined.

If the voices led in opposite directions to a fifth or octave, as at E and F, the above explanation would not answer, and another name was invented.

Here was material enough to puzzle the student with the question if all, or any, and which of these cases were allowed or forbidden: for some of these successions occur in the most simple and indispensable progressions of harmony; for instance, in the natural harmonies and the necessary cadences.



making it absolutely impossible to write a harmonic phrase without such progressions.

But with the same right they might, under similar circumstances, have forbidden the use of thirds, sixths, and sevenths, which can also become very conspicuous; for instance,

This very fact leads us to the solution of the whole question.

Such progressions are only conspicuous and disagreeable when they occur between unconnected chords, or when they are caused by unmelodious, unnatural progressing of one or more voices: when a voice instead of the nearest interval takes a more distant one of the next chord. Under such circumstances every interval becomes conspicuous.

Fifth Part.

The Inversion of Chords.

Until now we have principally thought of the discovery and connection of chords, while we have paid but little attention to the *melodious* progression of every single voice. We placed the middle voices as near as possible to the upper voice; but already in No. 143 we have deviated from this rule by giving to a voice that interval of the next chord which was nearest to it.

Our bass always seemed the least flowing and most unmanageable, because we had nothing but the fundamental notes of our harmonies to give to it.

In order to obviate this awkwardness we will now extend the same privilege to the bass which we have given to the upper voices; we will take third, fifth, or seventh of a chord in the bass, while we give the fundamental note, or rather its octave, to another voice.

This proceeding does, not of course, influence the character of the chord. It is a mere exchange of one or more intervals of one and the same chord, and has assisted us already in developing our melodic element of the upper voices.

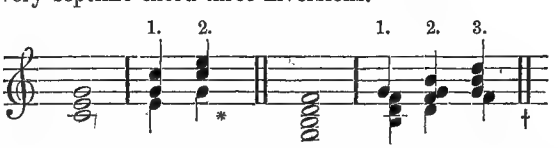
Such chord, the fundamental tone of which has been transposed to another voice, is called an *inverted chord*, and the proceeding is called *inversion*. In juxtaposition to the inverted chords we will call the uninverted ones "*fundamental chords*."

CHAPTER I.

ENUMERATION AND APPELLATION OF THE INVERSIONS.

When a fundamental tone leaves its place, another tone of the chord has to become the lowest. But it becomes only *lowest tone*, not fundamental tone; for *fundamental tone* we only called that one which in the original construction (by thirds), was the lowest. This one remains the fundamental tone, whether it be above, below, or in the middle.

There are as many inversions as (besides the fundamental tone) there are tones in the chord; consequently every triad has two, and every septime chord three inversions.

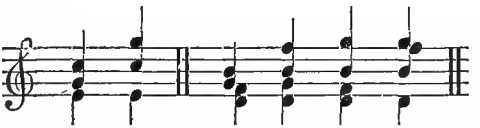
160. 

These inverted chords are so important, that they have received particular names. Thus the first inversion of a triad is called the chord of the sixth, or *Sext chord* as we shall call it for brevity's sake. It has received this name, beeause the most important notes of it, the third and fundamental note, form now the interval of a sixth. The second inversion of a triad is called the chord of the fourth and sixth, or *Quart-sext chord*, as we shall call it.

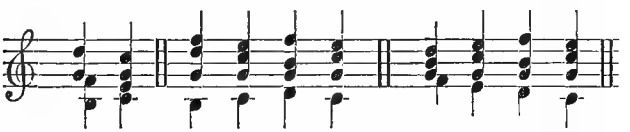
In the dominant chord the fundamental tone is again the most important tone, but next to it in importance is the seventh. Consequently the position of these two tones gives the name to the inversions of the chord. Thus the first inversion, with the original third in the bass, is called chord of the fifth and sixth, or *Quint-sext* chord, as we shall call it. The second inversion is called the chord of the third and fourth, *Terz-quart* chord. The third inversion, in which the seventh itself is in the bass, we count the intervals from the latter, and call it the chord of the second, or *Secunda chord.*

* See Appendix A. † See Appendix B.

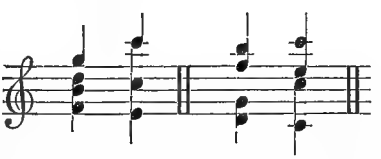
The names thus obtained are not influenced by any change of position in the upper voices. The two first chords of the following are both called sext-chords, and the others are all called terz-quart chords.

161. 

This addition to our chords, though of great advantage, gives us no new difficulty. For all inverted chords follow the same rules which govern the original and fundamental chords. Thus when we said of the dominant chord, that its third ascends one step, and that its fifth descends or ascends one step; the same rules still hold good in the different inversions.

162. 

There is but one thing which might appear strange to us. Why, in the above, for instance, does the fundamental tone *g* remain instead of going to the Tonic, according to the original rule? Because we consider it as octave of the fundamental tone, and its progression is prevented by the surrounding voices. Besides this the Tonic is otherwise represented. If the position of the other voices permits it, we can still go from the fundamental tone of the dominant chord to the Tonic.

163. 

though this proceeding is always most proper when done in the lowest voice.

When we analyze the effects of these inversions, we find that by them the chords are taken from their original position, from their proper and firm foundation, and that they lose their natural clearness and security in the same degree as we increase the dis-

tance of the lowest note from the fundamental tone. But in the same degree they partake of a mobility which is foreign to the original chords.

Therefore the sext and quart-sext chords are not fit to be final chords. The latter particularly brings the tonic triad in so strange a position, that we will only employ it when we are led to it by the drift of the bass, or when we have particular reasons for it, of which we shall learn some in future.

For the same reason neither quint-sext chord, nor terz-quart chord, nor secunda chord, are fit to prepare the end. Though they all must resolve into the Tonic, the strength of the step from fundamental tone to fundamental tone in the bass is wanting; some even forbid the Tonic in the upper and lower voices.

NECESSITY OF A DIFFERENT FIGURING.

Before we return to our practice, we must take a precautionary measure which becomes particularly necessary on account of the inverted chords.

As long as we placed every chord there where our first attempts at harmony made it necessary, we could hardly speak of a choice of chords. But we have not merely the choice of different triads for every tone of the melody, but we can also introduce the dominant chord arbitrarily, and in addition to this we have the inversions. It is clear that the figures which we formerly placed above the melody are no longer sufficient. We require now a different kind of signs which remind us what chords we have chosen, and what chords we have to carry out in notes. This new proceeding is called *figuring*. The composer in his sketches often makes use of this figuring in order to contrast the most essential points of his work. For this it would suffice to a degree, but it is impossible to express in it what we express in notes, and instead of giving it that importance which many theorists attach to it, we will only introduce it as we want it.

We are already accustomed first to remember the bass and then to add the middle voices; the bass aids us to find our way in the harmonic mass. Over or under the bass we place, therefore, this so-called figuring. For the present the few following remarks will be sufficient.

1. Triads generally have no figuring, because there are no simpler chords in existence. If, however, we intend a passage to be unaccompanied, if the bass shall go on alone, we will mark it with *t. s.* (*tasto solo*). When all voices proceed in unison, or in octaves, it is marked *all' unisono*, or *all' ottava;* if a single tone in the bass is intended to be unaccompanied we will mark it by a°.

2. Every other chord is indicated by figures which correspond with its principal intervals. Therefore

the Septime chord	is marked	by 7.
the Sext chord	"	by 6.
the Quart-sext chord	"	by $\frac{6}{4}$ or $\frac{4}{6}$.
the Quint-sext chord	"	by $\frac{6}{5}$ or $\frac{5}{6}$.
the Terz-quart chord	"	by $\frac{4}{3}$ or $\frac{3}{4}$.
the Second-chord	"	by 2.

3. The dominant chord, if before the end, requires no figuring, as it is too important to be forgotten, even without them.

We will make use of these figurings, and consider them as memoranda, as it were, of what we are going to do, as we are not yet able to represent to ourselves a whole series of chords with all their different voices. For the present, therefore, we will merely write down the bass and figurings, and add the other voices afterwards.

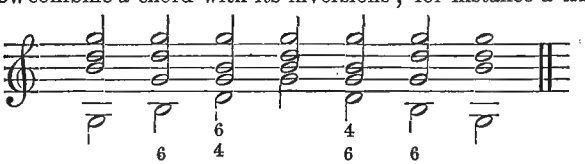
CHAPTER II.

THE FREE USE OF THE INVERSIONS.

A.—*New Designs and Passages.*

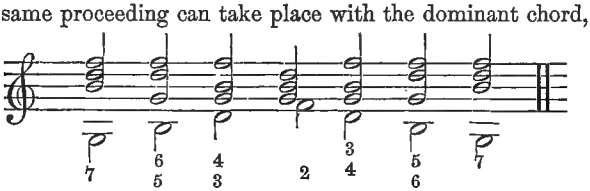
1. As we formerly passed through the positions of a chord, we cannow combine a chord with its inversions; for instance a triad,

164.



The quart-sext chord is here introduced, but we have been led to it by the bass which passes through all the intervals of a chord. The same proceeding can take place with the dominant chord,

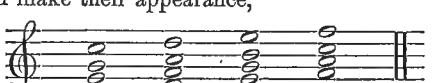
165.



and with every other triad and septime chord.

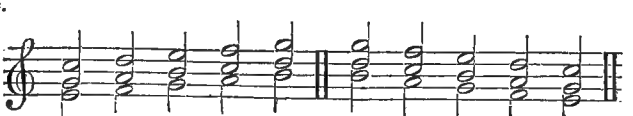
2. Formerly we dared not attempt a succession of triads in parallel direction, on account of the consecutive fifths and octaves which would make their appearance,

166.



but the more mobile sext chord permits us to make such successions and to employ them for new designs and passages; and at the same time gives us means for the accompaniment of the scale.

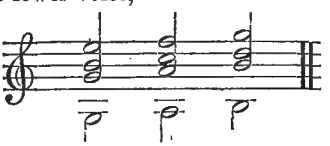
167.



None of these sext chords, it is true, have any connecting-tones with its neighbor; but the flowing diatonic movement of *all* the voices serves as a new and quite satisfactory connecting link. The strong drift of the voices gives us no time to perceive the lack of internal connection.

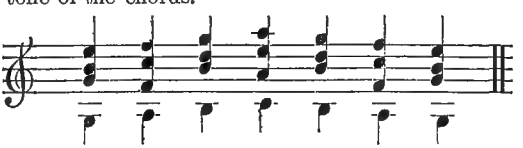
3. Such successions can be made *tetraphonic*, either by adding the octave of the lower voice,

168.



or by a middle voice alternately doubling the third and fundamental tone of the chords.

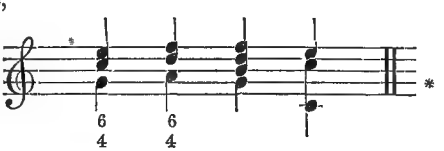
169.



It is apparent that the manner of No. 167 is the lightest; that of No. 168 is also flowing, but the zigzag movement of the middle voice in No. 169 makes it heavier and only appropriate for slow movements.

4. The quart-sext chord can also be employed in a small succession, like,

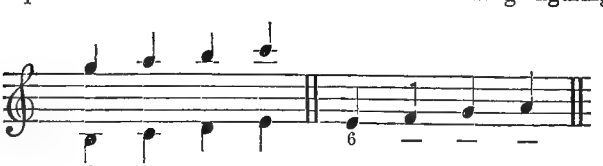
170.



but a longer continuation of it gives a very unsatisfactory result.

The figuring of the above is easily found. If we dislike the constant repetition of the same figures, we can mark them by dashes placed under or over the bass. Thus the following figuring

171.



* See Appendix A.

tells us that to each tone of the lower voice we are to take a sext chord.

B.—*Combination ef Inversions with Fundamental chords.*

In the above we have used the inversions independently. The combination of inversions and fundamental chords gives us a much more extensive source of designs. We need not mention that *every* inversion can be combined with *every* fundamental chord, as long as they do not cause faulty progressions. But the nearest-related chords enter most conveniently into combinations, be they now fundamental chords or inversions. Therefore the chords of the Tonic, Dominant, and Subdominant or Parallels are most easily combined in their inversions; for instance,

172.

In fact, the more convenient position of the tones makes some combinations much easier than in the fundamental position; thus the following chord-successions

173.

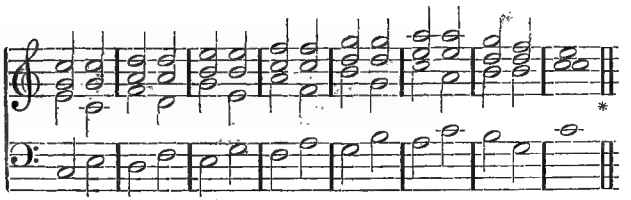
are much more flowing than the same in their fundamental position, where the bass has to take such wide steps.

174.

Still more important is the formation of new harmonic passages, which after what we have said of them will be comparatively easy. Only as examples we give a few passages, produced from our present means.

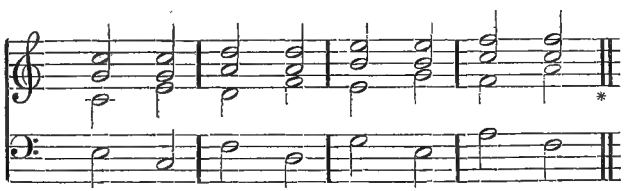
In No. 167 we first saw an ascending and descending passage of sext chords. Each sext chord reminds us of its fundamental chord; this prompts us to mix the two:

175.



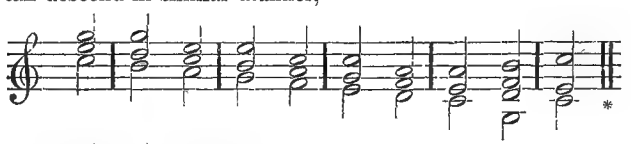
The anticipating of the sext chord would give us a second passage,

176.



We can descend in similar manner,

177.

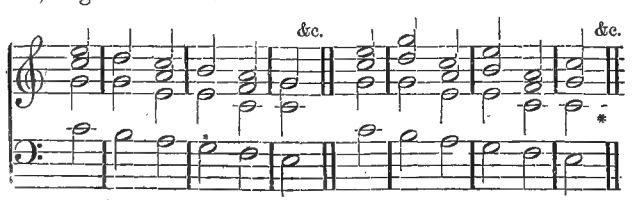


or :

178.

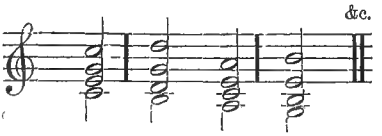
The addition of a third chord gives us still more variety, which, together with the thorough practice of every design through all positions, we leave to the industry of the pupil. No. 173, for instance, might be carried out thus :

179.



or thus :

180.



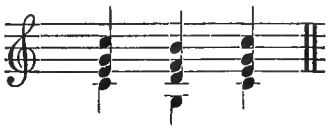
* See Appendix C.

These inversions give us additional means for the formation of

C.—*Preludes and Final Cadences.*

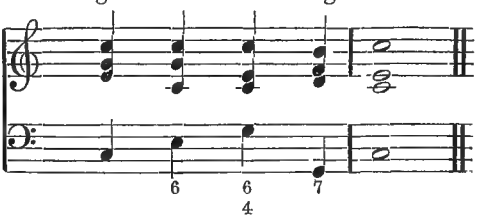
We have already seen one of the simplest preludes, consisting of tonic triad, dominant chord, and tonic triad.

181.



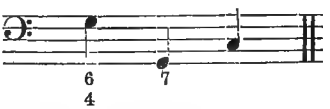
Now that we have a better control of the bass, though the progression of the same is vigorous and decided, it is nevertheless awkward. Leading the first chord through its inversions,

182.



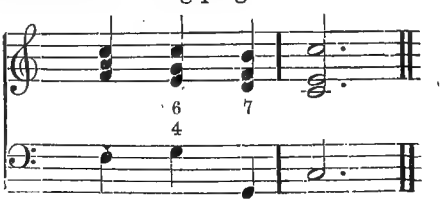
we arrive at the quart-sext chord, the lowest tone of which is at the same time the fundamental tone of the dominant chord, thus offering us a much more flowing connection. We will prepare our full cadences, therefore, with the quart-sext chord, though it is not absolutely necessary, as long as the fundamental triad gives us an awkward, but more vigorous preparation.

183.



We have also employed the subdominant chord for the more perfect decision of key and cadence. For it, too, the quart-sext chord serves as a more flowing progression in the bass.

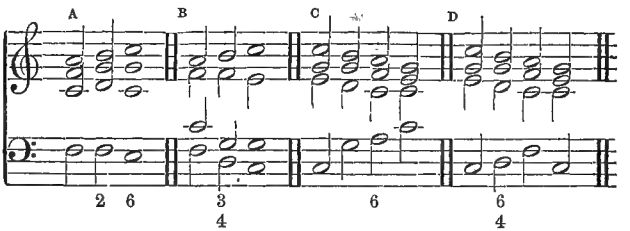
184.



D.—*Avoiding Faulty Progressions.*

The inversions furnish us also with new means of avoiding faulty progressions; for they permit that the bass avoid a fault, without forcing us to substitute a new chord.

185.

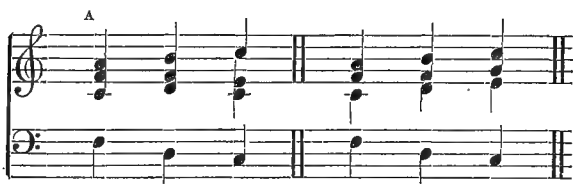


Here we have avoided the faults attendant upon the sixth and seventh degrees: not by alteration of the middle voices, nor by the addition of a new harmony, but simply by means of inversion.

E.—*A new chord, the Diminished Triad.*

Here something new offers itself to our consideration. The leaping progression of the tenor in No. 185, B, might in some cases displease us. Trusting to chance, we lead, therefore, the *c* of the tenor to the *d* of the next chord.

186.



This brings us to a chord—the dominant chord without its fundamental tone, reduced to three tones, and having the appearance of a triad. This triad (we have often met it without knowing what use to make of it) distinguishes itself from the former; it consists of

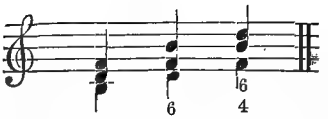
Fundamental tone, *minor* third, and *minor* fifth.

It contains less than the *minor* triad, and is called, therefore,

the Diminished Triad.

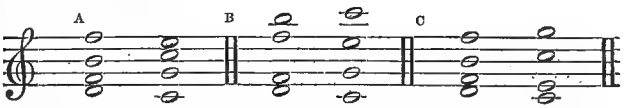
Like every other triad, it has its sext chord and quart-sext chord.

187



But, in reality, this new chord is nothing else than an imperfect dominant chord. Consequently, its tones follow the same laws. Its fundamental tone *b* (the former third of the dominant chord) ascends one degree to *c*; its fifth, *f* (the former septime), descends one degree to *e*; its third only (the former fifth) can ascend or descend. But in Nos. 152 and 153, already, we have permitted deviations from these rules, and we may therefore admit them in the diminished triad.*

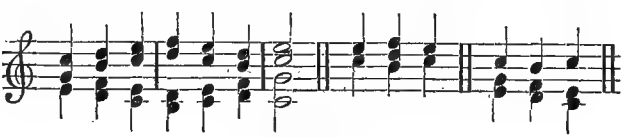
188.



Here, at A, B, and C, we see the seventh doubled, which occasionally may be necessary in order to obtain a flowing progression of the voices. In order to avoid consecutive octaves we must deviate from the original law, and permit one of the original sevenths to ascend. This is done best at A, where this deviation occurs in a middle voice; at B it is more perceptible, and at C it is disagreeable on account of its being in the upper voice.

It is not to be denied that this diminished chord lacks the fullness and firmness of the dominant chord; but we are often forced to employ it where the dominant chord would only disturb the movement of our voices; for instance,

189.



* See Appendix D.

CHAPTER III.

EMPLOYMENT OF THE INVERSIONS IN THE HARMONIZATION OF GIVEN MELODIES.

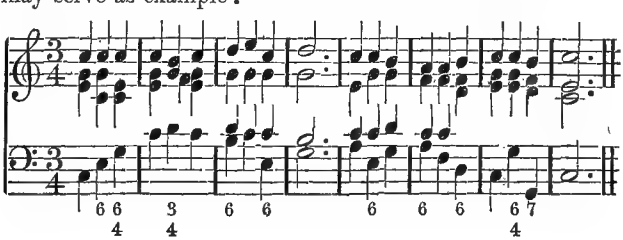
As a matter of course, we cannot introduce any chord in a faulty manner. And we must consider as faulty the entrance of every chord for which we have no reasons, or which does not appear in proper connection.

In this *third* manner of harmonization therefore, too, we must seize what lies nearest to us, and thence arrive at the more distant; but we will not pass over the former without sufficient reason.

We will therefore generally think first of the fundamental chords. Nearest to these fundamental chords are its inversions. These we will use when we remain longer in the harmony of the fundamental chord. Moving from one harmony into the other we will again seize the fundamental chord of this latter, unless its inversions serve to avoid faults (No. 185), or unless the current of the bass, or of the middle voices (No. 189), or the object of writing flowingly (No. 186), or fear of crowding severe successions, &c., induce us to employ the inversions.

The method of practice for this third species of harmonization is the same as that for the second. Another treatment of No. 147 may serve as example:

190.



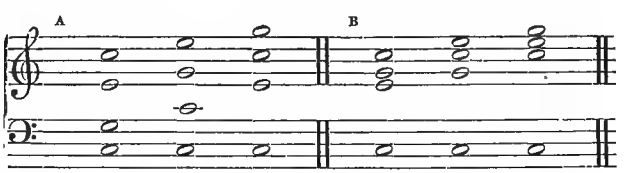
CHAPTER IV.

CLOSE AND DISPERSED HARMONY.

The inversions have given us the possibility of giving to the bass a more flowing melody; the other voices, also, have generally received a better connection, and for this purpose have often left their place next to the upper voice.

It now remains with us voluntarily to resign this close connection of the voices throughout whole phrases. We know already that the inversion of the different intervals of a chord are permitted, and that they neither disturb nor change the inner characteristics of such intervals. Thus the chords at A are as admissible as those at B.

193.



We have occasionally employed them.

What is it now we have done at A? We have drawn the tones of the chords apart. This is externally true, and corresponds with our sensation. They seem no longer pressed closely upon each other, they are extended and have thus become softer and more transparent. It is evident, also, that in this form the voices have more play, and can move more independently.

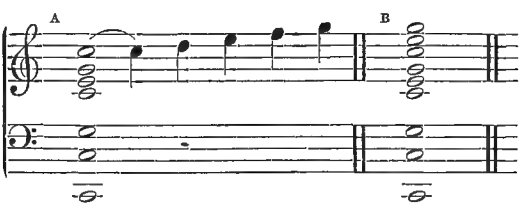
This form of representation is called the

dispersed position, or dispersed harmony.

We know already where the *close* and where the *dispersed* harmony has the advantage. We shall, at least, never employ it where it leads us into unnecessary difficulties. If we begin, therefore, with the latter, we must do so only after having ascertained whether we can continue it, or whether there is a fit place to introduce the *close* harmony.

The moment we desert the *close* position, an almost inexhaustible field of different positions of our intervals lies open for us. But not all of these positions are suitable. If we spread the intervals too far, we disturb the material connection of the chord. If we place some or all the intervals in the higher regions, the harmony will lack fullness. If we place them all in the lower regions, they will lose their distinctness. Nature, however, in its own harmony, has given us a model which we may safely follow.

194.

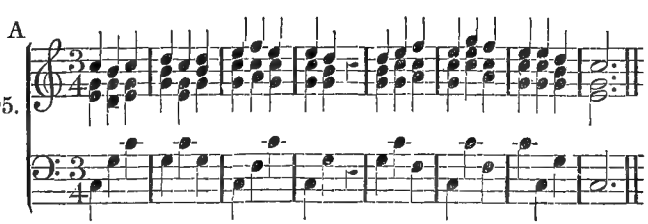


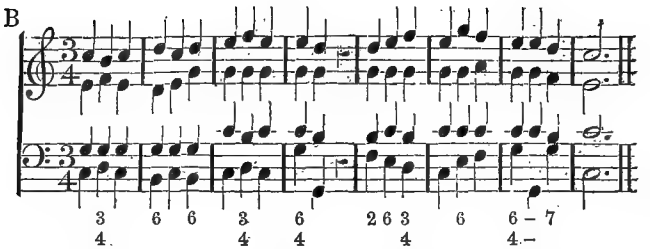
The above, as the student will remember, has been the foundation of our harmonic element. When we now consider the positions and distances of the different tones of which it consists, we find that

1. The lower the tones, the more distant from each other are they.
2. The actual diatonic melody begins with the highest *c*.
3. The full and close harmony lies in the middle tones, between the lowest *g* and the highest *c* of our model.
4. In the lower region there is only a doubling of octaves.
5. If we wish to double the whole chord, or some intervals of the same, this can better be done in the higher than in the lower region. (Compare B.)

These observations indicate to us our rules. Only that we will not follow them too strictly or too pedantically. Now for the application:

195.





But first we must observe, that horizontal dashes in the figuring signify continuation of the same harmony; as in the second chord of the penultimate measure, where they stand instead of the repetition of $\frac{6}{4}$.

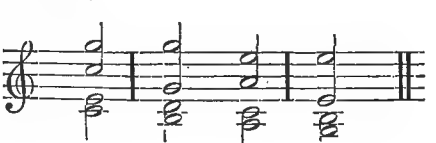
The above, for comparison's sake, is treated at A in the first manner. At B we have treated it in the third manner, with employment of the inversions, but in *dispersed* harmony.

Above all, we perceive at B the transparency of the voices and the evenness of distances. Only at the close of the thesis and of the antithesis the bass is rather more distant from the other voices. But this happens only on unconnected parts, and the immediate preceding of the higher octave.

This new manner of treatment should be practiced by the student on all the former phrases, and on melodies of his own invention;

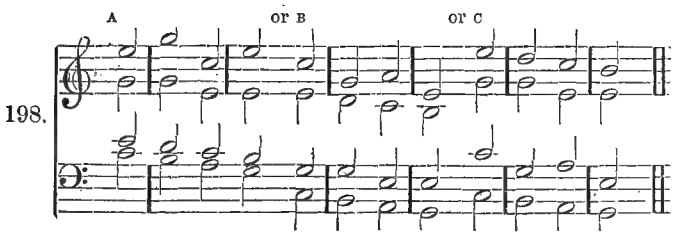
1. According to the *first* manner of harmonization.
2. According to the *second* manner of harmonization, and with arbitrarily-chosen chords.
3. According to the *third* manner, in *close* harmony, and
4. In *dispersed* harmony.

Finally, he should practice the dispersed harmony in harmonic passages, of which we have had several already. Each passage can be represented in more than one position; for instance, the one of No. 179 thus:

*197. 

or thus:

* See Appendix C.



RETROSPECTION.

With this we close the harmonic development of our major scale. It has given us

1. Triads: the *major*, *minor*, and *diminished*, with their inversions: *Sext chord* and *Quart-sext chord.*
2. The dominant chord with its inversions: *Quint-sext*, *Terz-quart*, and *Secunda chords.*

We have learned to combine these chords in various manners, and to form with them phrases, passages, and periods. The development of the harmony in accompaniments, phrases, passages, or periods, we will now call

MODULATION.

We had to resign the invention of periodical compositions, because our tetraphonous formations were not sufficiently free to permit us the equal consideration of all the requirements of a period, such as Melody, Rhythm, Construction, Harmony, and Voice-progression.

But instead of this we have learned how to find for *one* given melody three accompanying voices.

We must attach one more observation to all our former results. *We have obtained the justification of the major scale.* At first we accepted it as custom has given it to us. This serves already as justification; but since we have arrived at harmony, the question whether our major scale is well formed gains additional importance. We have to consider whether it is well formed for harmonic treatment, whether it contains the material for satisfactory modulation, whether it can close harmonically as well as melodically.

We can now answer these questions in the affirmative. Three

major, three minor, one diminished triad and the dominant chord, together with all the inversions arising therefrom, are sufficient means to harmonize the scale, and all the melodies therein contained. The dominant chord gives us a perfect cadence, the major and minor chords remind us of the nearest-related keys, and we have sufficient means for half cadences and imperfect cadences.

We can now confirm *the conception of a key*, that such a one must be fit melodically and harmonically as well, for the formation of phrases and periods.

But we must not close this chapter without drawing the attention of the student to the fact that it is absolutely necessary for him to play over all his compositions and exercises. In dispersed harmony, particularly, it will require some practice to do full justice to the different voices. These voices are all alike important, and should be played with precision and equality of strength.

When thus practising, the student should watch the effect of every chord, and the results of this attention will be a better command of means than can be acquired in any other way.

Sixth Part.

The Harmony of the Minor Scale.

CHAPTER I.

THE FORMATION OF THE MINOR SCALE.

We have justified the major scale harmonically. Its tonic chord was a major triad. Upon the dominant and subdominant we found also major triads, and in the tones of these three triads

$$\begin{array}{l} C - e - g \\ \qquad\qquad g - b - d \\ \qquad\quad f - a - c \\ \hline C \quad e\ f\ g\ a\ b\ c \\ \quad d \end{array}$$

was contained the complete major scale. But already in the major scale we found some *minor triads.*

We ought therefore to admit that as the major scale had *major triads* upon the Tonic, Dominant, and Subdominant, the minor scale ought to have *minor triads* upon the same points. These chords, in A minor, would be

$$\begin{array}{l} A - c - e \\ \qquad\qquad e - g - b \\ \qquad\quad d - f - a. \end{array}$$

This would give us the scale

$$A,\ b,\ c,\ d,\ e,\ f,\ g,\ a.$$

But in that case the minor scale would lose that most important of all chords, the *dominant chord;* for the latter is based upon a *major* triad. Consequently we must change the *minor* triad of the dominant into a major chord; for instance in A minor,

$$e\text{-}g\text{-}b, \text{ into } e\text{-}g\sharp\text{-}b.$$

For this proceeding only we have sufficient reason; for the rest

we will retain the above analogous formation. Were we to change the triad of the subdominant also into a major one (*d-f-a* into *d-f♯-a*), the minor scale would differ in but one chord and tone from the major scale.

A, b, c, d, e, f, g♯, a,

must therefore be our minor scale. Its character, in regard to harmonic treatment requires it so.

In this manner, it is true, it contains a conspicuous progression, from *f* to *g♯*, but at the same time it is also clear that by substituting *f♯* for *f*, the distinction of tone-sexes is almost completely destroyed. It has therefore been concluded to write the *ascending* minor scale,

A, b, c, d, e, f♯, g♯, a,

and the descending one,

A. g, f, e, d, c, b, a.

There, however, are in reality two different minor scales; or a minor scale in which two degrees are contained doubly:

A, b, c, d, e, f, f♯, g, g♯, a;

and which appears in every way unsystematic.

We shall therefore, without further explanation, take the above systematical one as foundation. If the harshness of the superfluous second does not agree with our melodies, we need not use it, but place another tone between (*f—e—g♯, a—g♯—a—f*, &c.), or we take the *g♯* an octave lower, as seventh from *f*. Later we shall find means to introduce in *major* or *minor* foreign chords and tones. It will then depend upon us to avoid this obnoxious progression, by raising the *sixth*, or by lowering the *seventh* degree. But for the present we shall win from it several important discoveries, and even in future we cannot so easily be convinced, that on account of its harshness it is inadmissible. Harshness, too, must have a corresponding representative in sounds.

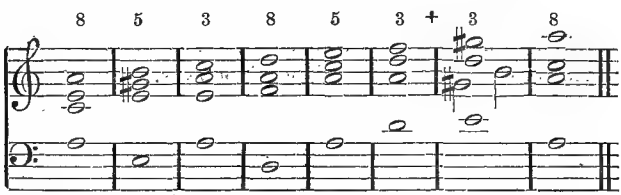
NOTE.—The student is here advised again to read over carefully the Appendixes A and B, that he may have a clear understanding of the whole subject.—G.

CHAPTER II.

HARMONIZATION OF THE MINOR SCALE.

We have now to find harmonies for our new scale in the same manner as we formerly found them for the major scale. We will at first follow our figures above the melody, and avoid the

200.



faults between the sixth and seventh degrees as formerly.

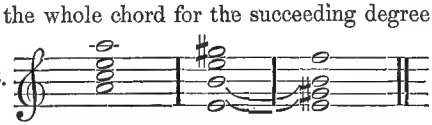
Here is again the beginning of our *first manner* of harmonization.

But the succession of the sixth and seventh degrees becomes more difficult in the descending scale; for in addition to all former difficulties we have now the harshness of progression in the scale itself. We might change (as before in No. 108) the second chord, and thus avoid consecutive octaves and fifths,

201.

but in that case the harmony has no connection, and that, too, at a point where the harsh progression of the melody breaks, as it were, the thread of the melody. We ought rather to double the connection of these two degrees by their chords. We attempt, therefore, to retain as many tones as possible of the first chord, or perhaps the whole chord for the succeeding degree;

202.



but in order to make room for the succeeding tone of the melody,

we will place the two upper tones in a lower octave. Here we have a new harmony before us,

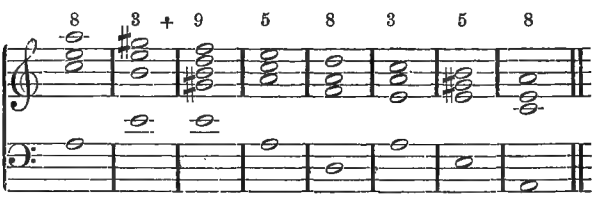
e-g♯-b – – f,

which even exhibits the normal construction, with the exception of the vacuum between *b* and *f*. Our second harmonic mass has already exhibited to us such a vacuum, by the filling of which we gained the dominant chord. Here too, therefore, we will fill the vacuum with the intermediate third *d*, and have thus a new chord of *five* tones

e-g♯-b-d-f

before us, which we place at once into the succession of chords which accompany the descending minor scale.

203.



Our main object is now achieved, only that we have introduced into a tetraphonic phrase a chord of *five* tones. This leads us to a further consideration of the new chord.

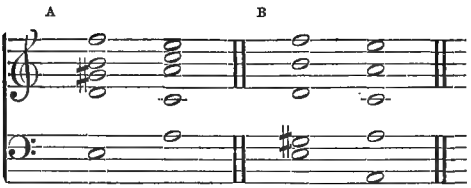
The fifth tone, which distinguishes it from all former chords, is the ninth from the fundamental tone, and gives to it the name ·

Chord of the Ninth. Ninth-chord, or Nona chord.

Apart from this ninth we have a dominant chord, the character and progression of which is already known to us. We can imagine the nona chord, therefore, as a dominant chord with added ninth. This additional interval is nothing but an addition to the highest interval of the first chord (the seventh) and consequently follows the progression of that interval. In the nona chord, therefore,

The Fundamental tone proceeds to the Tonic;
The Third ascends one degree,
The Seventh descends one degree,
The Ninth also descends one degree, and
The Fifth may either ascend or descend. In the following

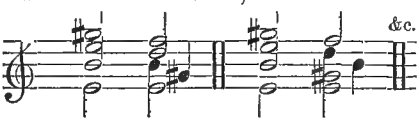
204.



the progressions can be seen more distinctly; only that in having the fifth descend, we place it above the ninth, in order to avoid consecutive fifths. (Compare A and B.)

It now remains for us to reduce the nonachord to four voices, because a pentaphonic (five-voiced) harmony is inadmissible in a tetraphonic phrase, and it might not at all times be satisfactory to give two tones to one voice, as we have formerly done.

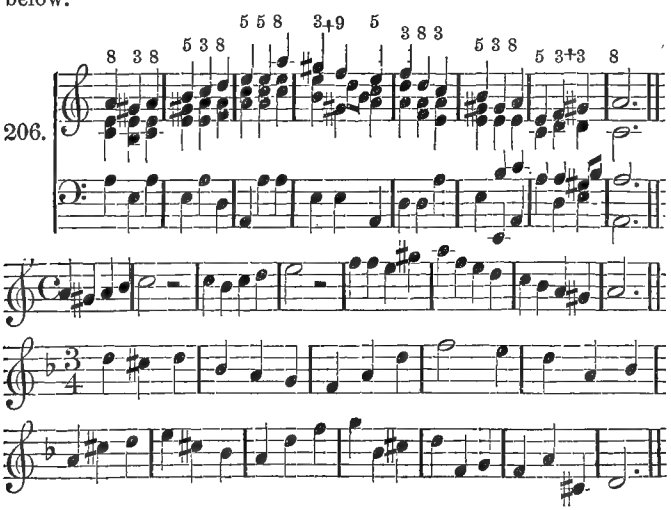
205.



Which tone here can now best be omitted? Undoubtedly the fifth. Fundamental tone, third, seventh—all are too significant, and the ninth is decidedly the most characteristic tone.

The harmonization of the minor scale is thus completed, and we can practice it in the following, and in the melodies given below.

206.



CHAPTER III.

THE NONACHORD. CONTINUED.

Our new chord is so conspicuous a formation that we would gladly win it for our major scale also. It consists, as we have seen, of the dominant chord with an additional third. In *C* minor, for instance, it would be

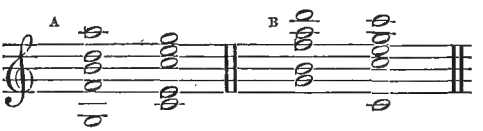
g-b-d-f-a♭.

If we now add another third to our dominant chord in *C* major, it would be

g-b-d-f-a ;

and thus we have obtained a nonachord in major, constructed from the tones of the major scale. It is only distinguished from the nonachord in minor by the ninth, which in the latter is *minor*, while in the former it is *major*. We will therefore call the one the major nonachord, and the other the minor nonachord.

But since the major nonachord, is constructed exactly as the minor nona chord, it follows the same rules.

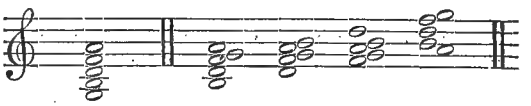
207. 

The Fundamental tone goes to the Tonic;
The Third ascends;
The Seventh descends;
The Ninth descends; and
The Fifth, if *below* the ninth, *must* ascend (A), otherwise it would create consecutive fifths. If *above* the ninth, the reason of this rule falls to the ground (B) and it can consequently either ascend or descend.

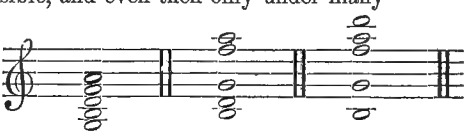
En passant, we must state that in thoroughbass figuring this chord is marked 9, from its most important interval.

*Inversions of the Nonachord.**

Examining the usefulness of the nonachord, we enquire at once for its *inversions;* its *positions* we have seen already in the above. But the tone-riches of the chord stand here in our way. It oversteps the boundary of the octave, and no sooner do we attempt an inversion, than the whole construction falls into confusion.

208. 

In particular positions only are these inversions of the nonachord possible, and even then only under many

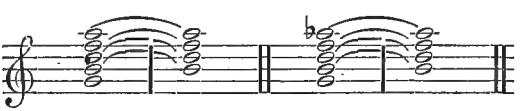
209. 

troubles and much hesitation. We shall therefore only use them carefully, and require no particular names for them. Even the omission of the fifth gives us here no relief. For the collision takes place between seventh, ninth, and fundamental tone, which latter in an inversion steps right between the two former.

This leads us to another manner of relieving the chord of its tone-burthen, We omit the fundamental tone, and thus gain two new chords of four tones, therefore

new Septime chords.

In the same manner we gained formerly the diminished triad from the dominant chord. Below are the two new septime chords, as the issue from the nonachord.

210. 

The latter only deserves a new name, because by and by it will become important; and since the diminished triad is contained therein, we will call it

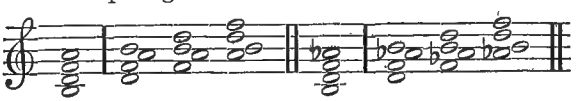
Diminished Septime chord.

We need hardly mention that the intervals of this chord follow the same laws as those of the original nonachord, *i. e.*, the

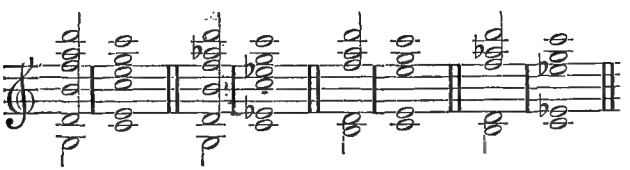
* See Appendix E.

fundamental tone *b* (former third) ascends, the fifth (former seventh) descends, the seventh (former ninth) descends, and the third (former fifth) can either ascend or descend.

These new septime chords can be inverted without difficulty, and without requiring further rules.

211. 

What intervals, we ask now, can be omitted or doubled? According to former rules the third is the one which can best be omitted or doubled; the latter, because it is the only one which can either ascend or descend.

212. 

Former theorists have prided themselves no little on their talent of inventing names for every insignificant new formation. This served only to confuse the mind of the student, without in the least facilitating his labors. We have only given names to the most important chords. Any little variation from these can be sufficiently designated in the figuring. We know that the ninth and seventh are the most important intervals of these chords, and if we represent them in our figuring it will be all-sufficient.

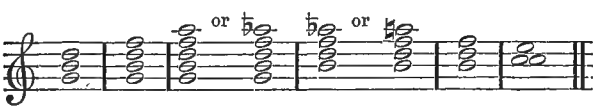
CHAPTER IV.

THE FREER USE OF THE NEW CHORDS.

We are now in possession of *three* species of triads, *three* species of septime chords, and *two* species of nonachords. All the triads, two of the septime chords and one of the nonachords are applicable in major as well as in minor. We also know the rules according to which they are applied.

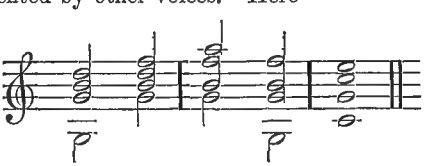
Each new chord gives us, therefore, by itself, and in combination with others, new harmonic designs, which according to former instructions can be easily found. One only shall be indicated here; the combination of those chords which have arisen from either omission or addition of intervals.

214.



These chords give us the best harmonic connection possible, except the combinations of positions and inversions of one and the same chord. We also discover here a new manner of avoiding the resolution of those intervals which are bound to a certain progression. In No. 160 the third *b* went to *d*, the seventh, *f*, went to *g*, because the same chord remained, and these tones were represented by other voices. Here

215.



f goes to *a* instead of *e*, because the chord remains and becomes a nonachord. Then again *a* to *f*, and *f* to *b*; not because the nonachord remains, but because it goes back into the dominant chord whence it issued.

However brief we can make our instructions by reference to

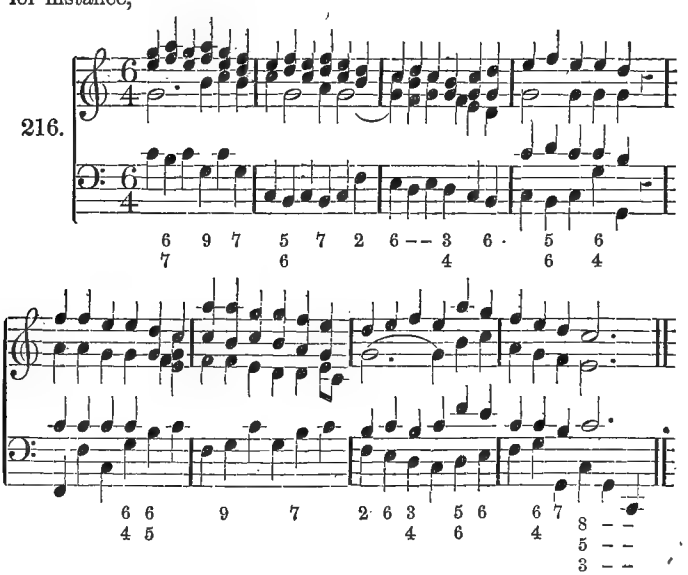
the preceding, it is still necessary for the student to continue his practice of harmonic combinations, in all inversions and positions, and to employ them in the formation of sequences and preludes, and particular attention should be given to the harmonization of given melodies.

To this we add the following remarks:

1.—*Major Melodies.*

We have found two new chords for them; the major nonachord and the septime chord arising therefrom, with its inversions. Both chords may be applied to all the tones contained therein, if it can be done without causing confusion and faulty progressions, for instance,

216.



2.—*Minor Melodies.*

We have occupied ourselves so little with the minor scale, that we now require a more thorough practicing of formations in its compass.

As introduction it would be well for the student to construct from the chords of the minor scale harmonic designs and sequences, as many as he possibly can. Then he ought to treat every

given melody in two manners. First according to the *first* manner of harmonization, and right below it, according to the second and third manners; *i. e.*, by choosing his chords and using them in their inversions.

We give here an example of the last manner; for the first we have no room.

217.

We find in the figuring of the above some new signs which require an explanation. Until now we have taken all our chords as the ordinary key-signature (the sharps or flats placed at the beginning of a composition) indicated them. In major this answered very well. Bnt in minor this key-signature does not correspond with the actual scale, and we have to make use of accidentals. The same has to be done in the thoroughbass figuring. In *C* minor, for instance, a 6 above *d* would indicate the sext chord *d-f-b♭*. But there is no *b♭* in our scale of *C* minor, and we, therefore, must place a ♮ before the 6, in order to change the *b♭* into *b♮*.

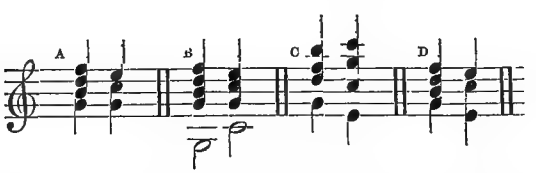
If an accidental without figure is placed above or below the bass, it always refers to the third. Thus the ♮ under the second note of the bass in No. 217, indicates that the triad *g-b♮-d* (not *g-b♭-d*) is wanted. If the key were *G* minor, a ♯ above the *d* would indicate the triad *d-f♯-a*. Frequently the figures are crossed instead of placing a ♯ before them: 2̸, 3̸, 4̸, 5̸, 6̸, 7̸.

3.—*Additional Licenses of the Dominant chord.*

We have now completed the circle of harmonies developed immediately from the first fundamental harmony and the tones of the major and minor scales.

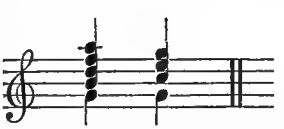
Among all, the dominant chord has proved itself the most productive, having given birth to the diminished triad and to the two nonachords with their septime chords. Already on a former occasion we have permitted this chord a less restricted progression; its third, if covered by the middle voices, was allowed to descend, while the seventh was permitted to ascend, in order to make the succeeding chord complete. It is now our next object to favor the better connection of chords. We will permit the fundamental tone, therefore, to remain as fifth of the succeeding chord (A) as if it were merely the octave of an omitted fundamental tone (B); or it may descend into the third of the succeeding chord, instead of its fundamental tone (C), while the seventh (covered by the other voices) ascends, in order to avoid covered octaves, which might be obnoxious, particularly when in the outer voices (D).

218.



The fundamental tones of the nonachord may also participate in the first license;

219.



but the second is less admissible, because the accompanying ninth forces the seventh to follow its natural laws.*

* See Appendix F.

Seventh Part.

Modulation into Foreign Keys.

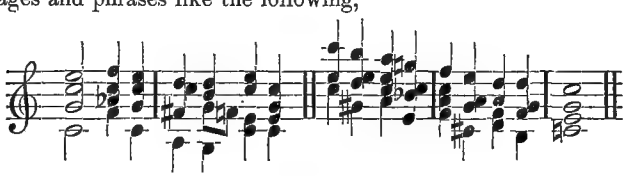
All our formations thus far moved within the compass of any *one* particular major or minor key, and contained neither tones nor chords foreign to that key. But in order to extend the sphere of our labors, and to add to our melodic and harmonic means, we must call other tones and other chords into action, *i. e.*, we must combine the tones and harmonies of two or more keys in one composition. The technical term for this proceeding is "*to modulate into foreign keys*," or "*to modulate*."

This combination of several keys in one phrase can take place in two different ways. We can modulate into another key and remain in it to the end of the composition, or at least form in it an essential part of the same. In such case the step from the one key into the other is called a "*transition*."

Or we can merely touch the new key, use one or a few chords, or even a sequence. In that case we have a mere "*digression*."

If, therefore, in a composition in *C* major we would introduce passages and phrases like the following,

220.



which are not indigenous to that key, but which would have been touched merely accidentally, without actually exchanging *C* major for another key, these foreign chords would be called "*digressions*." How to arrive at such chords, how to classify them, or how to construct them, requires no particular instruction, as the results of the rules of transition will furnish all the requisites.

Transition, then, according to the above, is to leave one key, in the course of a composition, and to seize distinctly another one, in order to construct, or execute in it an essential part of the whole.

CHAPTER I.

MODULATION FROM ONE KEY INTO ANOTHER.

We modulate from one key into another by exchanging the tones and harmonies of the one for those of another; for instance, instead of *C* major,

c, d, e, f, g, a, b, c,

with its three major triads (*C, G, F*), &c., we take *A* major:

a, b, c♯, d, e, f♯, g♯, a,

with its three major triads (*A, E, D*), &c. This would be the most complete, but also the most troublesome manner of modulating.

But we perceive immediately that much is here mixed up which might be called superfluous. The two keys, however distant from each other, have several tones in common (*a, b, d, e*), in which tones, therefore, they are *not* distinguished from each other, and in which we do not perceive that *C* major has been exchanged for *A* major, These mutual non-distinguishing tones need not, therefore, be touched.

The remaining three, *f♯, c♯, g♯*, indicate the transition. But even in our monophonic phrases we have already used foreign tones without exactly exchanging one key for another. We require a more distinct *sign of transition* than mere single tones. This we can only expect from that harmony in which we have discovered the first conception and the foundation of keys.

But which are the harmonies which serve us as the surest sign of a transition? Those which surest indicate their key. Therefore the dominant chord with the nonachords derived from it, and the triads contained in it are the ones. The moment one of these chords appears in the course of our modulation, we say that we have entered its key.

We attach all further observations at once to the first transition-chord, the "dominant chord," and then pass on to the others.

1.—THE DOMINANT CHORD.

We know already that every dominant chord can only exist in its own key and in no other. If, therefore, in one modulation a foreign dominant chord makes its appearance, for instance, in *C* major, the chord *e-g♯-b-d*, it is at once impossible that we can be in *C* major, or in any key but *A*.

The dominant chord is the distinct sign of the introduction of its key. But it is *no* sign for the tone-sex; for in major and minor it is exactly alike. The above dominant chord tells us distinctly that we are no longer in *C* major, but it is undecided whether we are in *A* major or *A* minor. This is only decided by the following chord; if *a-c♯-e*, we have gone to *A* major, if *a-c-e*, we are in A minor.

Since the dominant chord is the decisive *sign* of its key, it must also be the decisive *means* to modulate into its key. If we intend to modulate therefore into any other key we have but to introduce the dominant chord of the latter. In order, for instance, to modulate from any key into *A* major or *A* minor, we have but to introduce the chord *e-g♯-b-d*, and since the dominant chords of major and minor are exactly alike, we are at liberty to go to major or minor. We need, therefore, only to know the dominant chord of a key, and the proper manner of its introduction, to modulate into the same.

But this modulation must be effected in the course of a composition, according to the rules of harmony. Not alone that faulty progressions must be avoided, but the chords shall also appear well connected. We must bring the transition-chord (the dominant chord of the new key) into connection with the last chord of the preceding key; both chords must be connected by mutual tones.

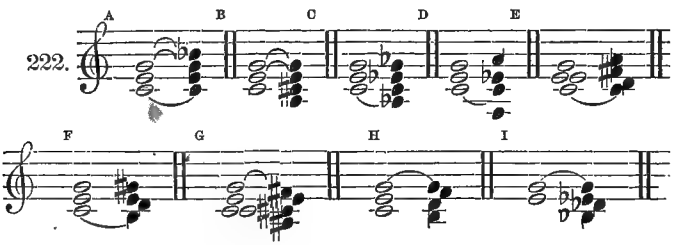
It is necessary, first of all, to know which chord of the preceding key was last touched. It cannot have been a dominant chord, nor a nonachord, nor a diminished triad; for all of these have to return to the tonic triad. Our transitions can therefore only be attached to major or minor triads. We have in major three major triads and three minor triads. In minor we have two major and two minor triads. Here

221.

we see at A the six triads of *C* major, and at B the four triads of *A* minor to which a transition-chord could be attached.

It is clear that we can attach to each of these chords any transition-chord which has one or more tones in common with it. With the chord *c-e-g*, for instance, we can connect the following dominant chords:

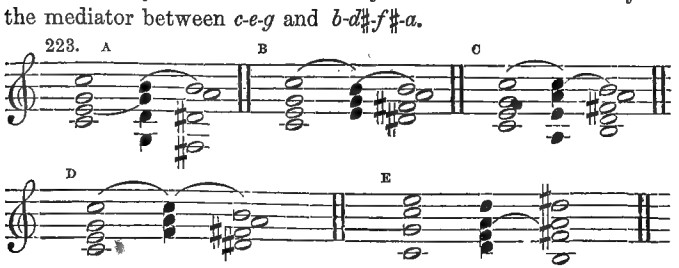
222.



Deducting the dominant chord at H, because it brings us back to the preceding key, we have still eight actual transitions: to *F*, *D*, *D*♭, *B*♭, *G*, *A*, *B*, and *A*♭. We need hardly mention that we have used the inversions of the dominant chord, in order to effect the transitions as fluently as possible.

If we intend now to make a transition from a chord, for instance from *c-e-g*, into a key, the dominant chord of which is not connected with the former, we make use of a *mediator*. In going from *C* major to *E*, for instance, we would require the chord *b-d*♯*-f*♯*-a*, which has no mutual tone with *c-e-g*. We, therefore, go first to another chord in *C* major which has one or more tones in common with the dominant chord of *E*, and which at the same time is connected with the chord *c-e-g*. Of such chords there are several, and every other chord in *C* major can here accidentally be the mediator between *c-e-g* and *b-d*♯*-f*♯*-a*.

223.

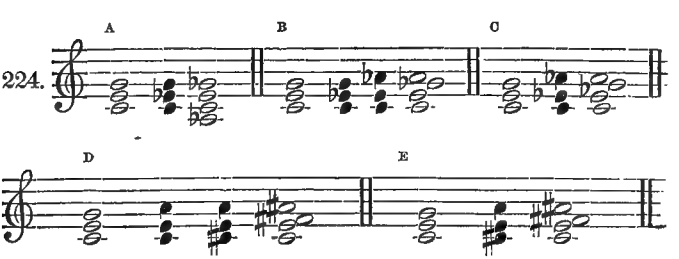


It is easily perceptible, however, that one of these mediations lies nearer than the other; the one at E is the loosest, because the mediating chord has no tone in common with the first chord, and is only related to a degree, because it belongs to the same key.

However, the connection by means of tones in common, (as we already know) is merely external. A more intimate relation exists between such chords as indicate nearly-related keys. Since a major or minor triad always reminds of that key in which it is the tonic chord, we must consider those chords which remind us of the to-be-expected key, or indicate the way to it, as nearer than the other. In No. 223, for instance, the chord *e-g-b* at B reminds us by itself of the key of *E*, and prepares us best for the transition into *E*; the chords at C and A, indicate at least the direction, following which we afterwards find the key of *E*; at D and E; however we are led into an opposite direction, *i. e.* keys with flats. At B, therefore, we see the nearest mediation, while at D and E we find the most distant ones.

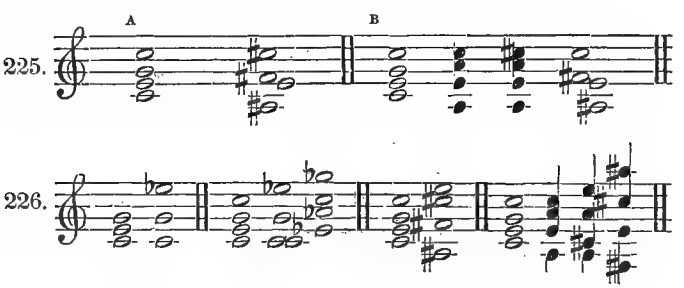
Finally we must consider that a transition-chord, though containing one connective tone, may contain so many foreign tones that a mediation by means of interposed chords with less foreign tones is desirable. Therefore we shall now make use also of foreign chords to prepare the transition, by arbitrarily changing major to minor, and minor to major triads; for instance, in *C* major: *c-e-g* in *c-e♭-g*, and *a-c-e* in *a-c♯-e*. Thus, in No. 224, C, the dominant chord *a♭-c-e♭-g♭*, though connected with the previous chord by means of C, was still too distant from *C* major, on account of the three foreign tones *a♭-e♭-g♭*. In order to effect a better connection we interpose another chord as mediator; as for instance, at A

224.



the chord *c-e♭-g*, (we change the major chord into minor) and thus gain not merely an additional mutual tone, (*c-e♭*) but obtain also a harmony which reminds us of *C* minor, and brings us nearer to *D♭* major than *C* major. At B and C we find other mediations of the same transition; at D and E we find a mediator for the abrupt transition of No. 222, G.

In order, then, to modulate into any key, the most practical proceeding is, to write down first the chord *from* which we modulate and at some distance from this the dominant chord of the key *into* which we wish to modulate. For instance, in modulating from *C* to *B*, the first sketch would be the one at A.



Then we must examine whether these two chords have sufficient connection. In the above case the tone E is the connective tone, but the remaining tones are in absolute contradiction to the first chord and to *C* major. If the connection of the two is not satisfactory, a glance at the chords will soon suggest a harmony which connects the two chords. Thus in the above (B), we have first interposed the minor triad *a-c-e*, then the major chord, *a-c♯-e*, and finally have taken the dominant chord of *B*.

We must be careful, however, to place the foreign tones in that voice which can take it most conveniently, *i. e.* which has formerly had the same degree now to be raised or lowered. Thus in No. 225, A, we have given *c♯* to the upper voice which had *c* and *a♯* to the lower voice which had *a*. A strict adherence to this rule will be our best safeguard against harsh progressions.

According to the above developments, the dominant chord gives us the following modulations or transitions into all the different degrees of our tone system.

From *C* to

227. *D♭* *D* *E♭* *E*

F *F♯* *G* *A♭*

A *B♭* *B*

We have here only employed the nearest and best mediating chords. Mediating for every particular case and its application to minor keys, and the exercise in different positions of chords and other keys is left to the pupil.

Each of these modulations, as we know already, can lead to minor as well as to major; and, as a matter of course, the keys of *D♭*, *E♭*, *F♯*, &c., can be exchanged at any time for their enharmonic representatives *C♯*, *D♯*, *G♭*, &c.

We must now speak of a modulation which does not strictly deserve that name, and for which our ordinary transition-chord (dominant chord) does not suffice. We have reference to the major and minor of the tonic, (for instance, *C* major and *C* minor.) The dominant chord which the two keys have in common is certainly the nearest mediator we could seize,

228.

but exactly because of its being a chord belonging to either of these keys, it can no longer be the sign of a transition. If such sign is required, the minor triad of the subdominant would be the nearest indication of our going to minor, (A)

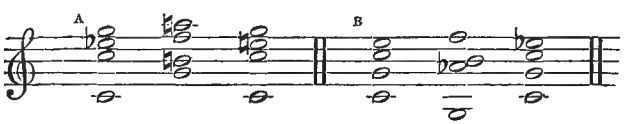
229. A B

and the major triad of the subdominant, perhaps preceded by the major tonic triad, (B) would indicate the transition from minor to major.

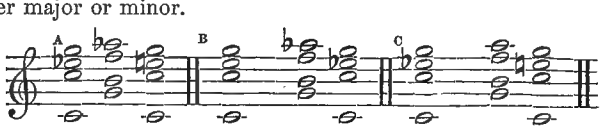
2.—THE NONACHORDS.

Since these chords contain the complete dominant chord, they must be capable of having the same facilities for modulating into a key, and characterizing the same. And, indeed, they fur nish us the same transitions, demand and find the same mediation. only that on account of their tone-bulk they are somewhat more difficult to manage.

But on account of their nature they have the additional advantage of being at the same time indicators of the tone species into which we modulate. The major nonachord leads us to expect major (A), the minor nonachord indicates minor (B).

230. 

Owing, however, to the just-mentioned existence of the dominant chord in either, we take occasionally the liberty of considering every nonachord as a mere dominant chord, and resolve them in either major or minor.

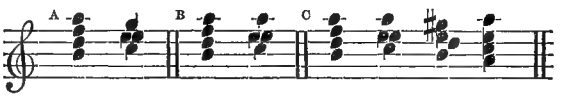
231. 

That the resolution (A) No. 231, is less satisfactory than the one of (B) 231, is apparent, and that the one of 231 (C) is more satisfactory than the one 231 (B), is apparent.

3.—THE SEPTIME CHORD OF THE MAJOR NONACHORD.

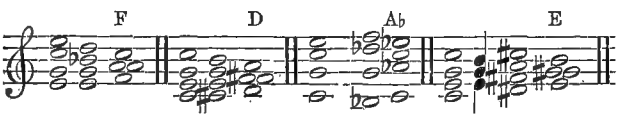
We know that this chord originates from the nonachord, and consequently indicates that chord and the dominant chord as well as the key. Nevertheless it has not the perfect characteristic decision of others; for, according to its tone-contents, it can exist as well in the parallel key; for instance *b-d-f-a* can be in *A* minor as well as in *C* major. But this insignificant doubt is soon silenced

by the succeeding chord, while our own feeling anticipates already the signification and the progression of the chord. Thus, for instance the resolution of *b-d-f-a* into *C* major, as at A, is perfectly satisfactory, and yet the one at B is not exactly inadmissible,

232. 

but requires a certain confirmation as at C.

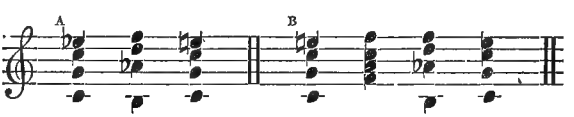
Independent of these deviations, however, the septime chord furnishes its series of modulations with or without mediation, for instance to

233. 

simply lacking the vigorous step from fundamental tone to fundamental tone, or from dominant to tonic.

4.—THE DIMINISHED SEPTIME CHORD.

We know that this chord is derived from the minor nonachord, and with the latter from the dominant chord. Consequently it must share the faculty of either, in effecting and characterizing modulations. With the original minor nonachord, it belongs to the minor species, but like the former it is used in major.

234. 

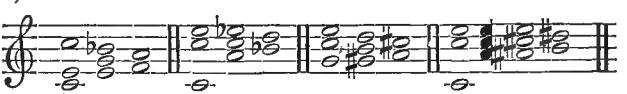
If this deviation were not so trivial, it would, according to its original position, indicate the minor key at once. But in return it has none of the vagueness of our last septime chord. According to its derivation and tone-contents it can only belong to one key; for instance the chord *b-d-f-a♭* can only be found in *C* minor.

5.—THE DIMINISHED TRIAD.

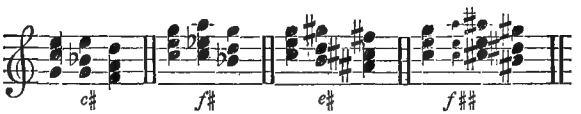
We have first considered this chord as a dominant chord with

omitted fundamental note; *b-d-f*, for instance, appeared to us as the incomplete dominant chord of *C*. But since the diminished triad, like the diminished septime chord, consists of thirds, placed one above the other, we can also derive it from this chord by omitting its fundamental tone and retrace it to the key of the diminished septime chord. For instance, *b-d-f* referred to *g-b-d-f*, would indicate the key of *C* major or *C* minor. In the other case it would refer to *g♯-b-d-f*, therefore to *e-g♯-b-d-f*, or in other words to the key of *A* minor.

We see by this that the diminished triad, though sharing the modulating faculties of the dominant chord, modulates with less decision. The succeeding chord only tells us which of the two indicated keys was meant. The following modulations, for instance,

235. 

can be based on the dominant chords of and lead to *F*, *B*♭, *A*, *B* major or minor; but they might also be based upon the diminished septime chords, *c*♯ *f*♯ *e*♯ *f*𝄪, and we might lead them accordingly to *D*, *G*, *F*♯, *G*♯, minor (or major.)

236. 

Only the final chords in each of these examples tell us what key follows in reality.

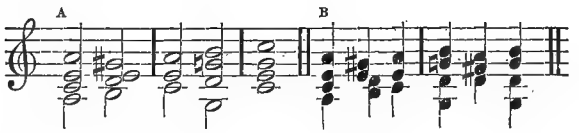
Our ear, however, always expects after a diminished triad that key which is nearest related to the previous one. Thus if in *G* major, for instance, the chord *b-d-f* occurs, we trace it to *g-b-d-f*, and expect *C* major, because this key is nearer related to *G* major than *A* minor. But if the same chord occurs in *E* minor, we trace it to *g♯-b-d-f*, and expect *A* minor, because this latter key is much nearer to *E* minor than *C* major.

6.—THE DOMINANT TRIAD.

This chord evidently lacks the decision of characterization which the dominant septime chord with its sub-species is in possession

of. The chord *g-b-d*, for instance, can belong to either *G* major, *D* major, *C* major, or *C* minor. Yet we have observed already, that the dominant triad, if succeeded by the tonic triad, will be treated as an imperfect dominant chord, and be resolved accordingly. Therefore a mere triad can also become a sign and means of modulation if it is distinguished sufficiently from the until-then-prevailing key, and if it resolves like an imperfect dominant chord into the tonic harmony of its fundamental tone. Thus it is here at A

237.

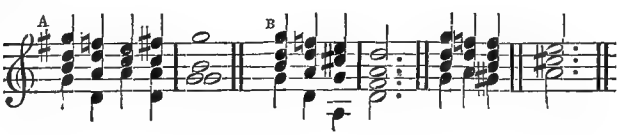


The phrase according to the first chord is in *A* minor. But the triad *g-b-d* disagrees with this key, and since it resolves immediately into its tonic harmony, it indicates sufficiently the modulation from *A* minor to *C* major. Certainly it might also as at B have been led to *G* major or even *D*, and this is exactly the lack of decision which we have mentioned. But even here, our ear anticipates the decision; it expects the first modulation to *C* major, because *A* minor and *C* major stand as parallel keys in nearest relation, while *G* or *D* stand only in more distant relation to it.

7.—THE MINOR TRIAD.

Finally this chord can also be the sign and means of a modulation, provided it contains one or more foreign tones. By this it indicates at least that for the moment the original key reigns no longer, and we expect either a return into that key (A), or an actual modulation into a key to which the new chord is indigenous (B).

238.



We need not add that our former mediating chords with foreign tones belong to this category.

In regard to the succeeding chapter, the application of these new means, we have now to remark, that we have to consider them in three different views, each of which is so productive that we have to consider each one by itself.

1. We consider the modulation into foreign keys, merely as means to combine the harmonies of several keys in one composition.

2. We construct with them, independently, new formations.

3. We use them in more extended and well constructed formations.

CHAPTER II.

INTRODUCTION OF THE NEW MEANS INTO THE HARMONIZATION OF GIVEN MELODIES.

We have now, therefore, before us the ability of combining in one phrase, in a single melody, two or more keys. A distinction arises now, which formerly we had not to make. We must distinguish melodies which absolutely require modulation into foreign keys, from such melodies as merely permit, without absolutely requiring them. We might call them *indigenous* and *digressive* melodies.

The digressive melodies will always lead us for more or less time into foreign keys. Our harmony, therefore, will have to be constructed so that it faciliates and effects this modulation into the new key. How this is to be done we have already learned in the last chapter. Once arrived in the new key we treat it for the time as an original key and require for it no further instruction. It remains only for us to ascertain

1. Whether a melody requires a modulation, and where this modulation leads to; or
2. Whether the melody admits of one or more digressions.

In the latter case we shall always prefer that which lies nearer, and shall rather modulate into nearest-related keys, (the keys of the dominant, subdominant and the three parallel keys), than into more distant keys. Having arrived in the new key we proceed again on the same principle, *i. e.*, we prefer remaining in it to unnecessarily seizing another new key.

A.—*The Ascertainment of Digressive Melody.*

The characteristics of a digression can be external or internal; the former actually exhibited, the latter merely indicated in the melody.

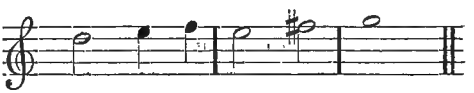
1.—EXTERNAL CHARACTERISTICS.

These consist in the *foreign tone* of a melody. If in a melody

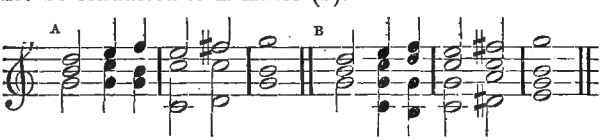
in *C* major the tone *f*♯ makes its appearance, we consider it as no longer in *C*; for the tone *f*♯ is foreign to the key of *C* major. Having arrived now by means of this tone at another key, *G* major, for instance, and the tone *f*♮ makes its appearance, we have to consider the *f* again as a sign of digression, for in *G* major there is no *f*.

But to what key does this foreign tone of the melody lead us? This question we cannot answer with complete certainty. We suppose at first we have arrived in the key in which the foreign tone first appears. Proceeding from *C* major, for instance, we would consider *f*♯, not as leading to *D* major, *E* minor, &c., but to *G* major, as the key in which *f*♯ first appears. A c♯ in *C* major, we do not consider as belonging to *A* major or *B* minor, but as belonging to *D* major, as the first key to which the c♯ is indigenous.

But these are all mere suppositions; we can make quite different uses of such tones. This melody, for instance,

239. 

can be conducted from *C* major to *G* major (A), it is true, but it can also be conducted to *E* minor (B).

240. 

At some future time we shall even discover another possibility, viz.: that a foreign tone belongs to no harmony, and consequently indicates neither harmony, nor modulation, nor digression.

This insecurity of external characteristics leads us to

2.—INTERNAL CHARACTERISTICS.

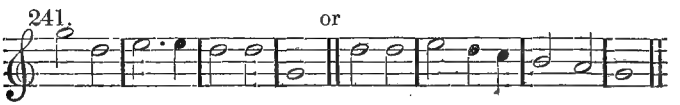
These are based upon the regular progression of all modulation, and upon the principles therein developed.

To wit—as soon as we find a doubtful external sign of digression, we interpret it according to the principles which guide our modulation, and among the probable keys we select that one which is the nearest to the principal tone, or which otherwise cor-

responds with the laws of construction. Accordingly we would lead the phrase No. 239 from *C* major to *G* major as the nearest related, and not to *E* minor. If then in the course of the melody the *f* again appears, we should go to *C* major, as the nearest key to *G* containing an *f*, in preference to any other.

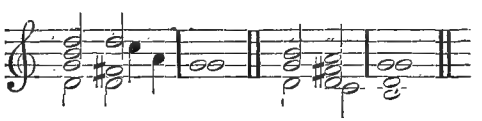
Even if a melody contained no foreign tone, we would ask whether internal signs would not make a digression advisable, nay, preferable to the retaining of the same key; if, for instance, the melody of a first part in *C* major should end thus:

241.



we would consider it as a cadence in *G* major,

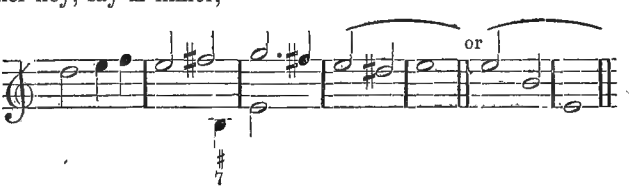
242.



and not as a half cadence with the dominant chord, and as a forced modulation in the principal key.

And thus, *vice versa*, the phrase No. 242 would *not* be considered as a modulation into *G* major, the continuation proving that another key, say *E* minor,

243.



was meant as the goal of the modulation: though it is admissible to consider the first *f*♯ as leading to *G* major, and turn only at the second *f*♯ into *E* minor.

This will suffice, for the present at least, to ascertain the harmonization of digressive melodies; by and by we shall arrive at a more thorough understanding.

B—*Discovery of all possibly eligible chords.*

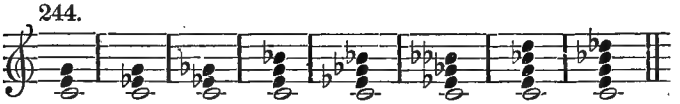
Already in our second manner of harmonization we enquired what chords could possibly be chosen to a tone of the melody.

We ascertained still later, that every tone can be either a fundamental tone, third, fifth, seventh, or ninth of a chord. But at that time we were limited to the indigenous chords.

We have now a much larger field for such investigation; for every tone of a melody can be not alone, third, fifth, seventh, &c. of a triad, septime or nonahchord of the key in which the melody is written, but in any key which contains that particular tone. Thus the tone *C*, for instance, can be:

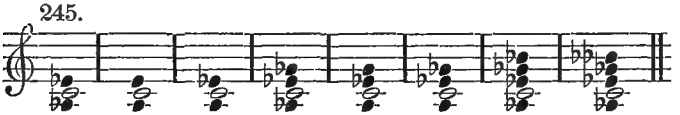
1. Fundamental tone of a major, minor, or diminished triad, three septime chords, and two nonachords.

244.



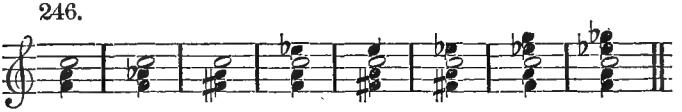
2. Third of three triads, three septime chords and two nonachords.

245.



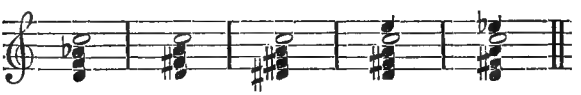
3. Fifth of three triads, three septime chords, and two nonachords.

246.



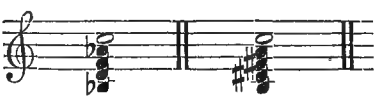
4. Seventh of three septime and two nonachords.

247.



5. Ninth of two nonachords.

248.



We have discovered, according to the above, one and thirty harmonies for every single tone, independent of the different inversions.

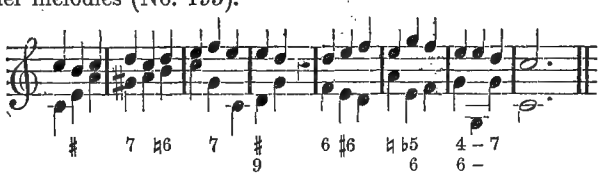
C.—*Application of these means to indigenous or digressive melodies.*

We have now ascertained how many chords can possibly be used for every tone of a melody, and the question arises which of them we have to choose, or which to exclude. Our general rules will be sufficient for the present. No chord should be chosen, the introduction of which would cause faulty progressions; the connection of the harmony must be retained, and each must be conducted conveniently (fluently) and intelligibly. The rest will develope itself in the course of our labors.

Our first care next to this, will be to preserve the unity of key, and the turning points of the modulation. We shall, therefore, end with the dominant chord and the tonic triad, and generally begin with the latter, while we shall mark the thesis of a phrase with the triad of the dominant, or with a modulation to the key of the dominant. Finally, in the course of a composition we shall always think first of those chords which belong to next-related or near-related keys, in preference to chords of more distant keys.

Let us attempt now to apply our new means to one of our former melodies (No. 195).

255.



The first chord remains unchanged. The second tone we consider as fifth of a triad which brings us to *A* minor. The *d* immediately after, we consider as fifth of a diminished septime chord, (*g*♯-*b*-*d*-*f*) which forces the tonic triad of *A* minor upon us. The sixth chord brings us back to *C* major. The thesis closes with the chord *g-b-d*. We can either consider it as dominant triad in *C* major, and in that case we accompany the preceding *e* with the chord *c-e-g*, (*vide* No. 195); or we can consider it as tonic triad of *G*, in consequence of which we have to modulate into it. Accordingly we treat the tone *e* as ninth of the chord *d-f*♯-*a-c-e*, or as seventh of *f-a-c-e*. We have preferred the former, because it is easier for the bass to proceed from *c* to *d*, than from *c* to *f*♯.

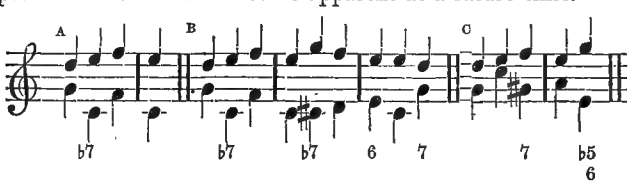
Having occupied the parallel and dominant principally in the

first part we turn now to some other related keys into which to modulate. There remains for us the parallel of the dominant, the subdominant and its parallel. It would require the chord *b-d♯-f♯-a*, or some harmony derived from it to get into the first of the above mentioned keys; but all these chords are too foreign to the last four measures of the melody. We are limited, therefore, to the keys of *F* major and *D* minor, if we insist upon introducing modulations into foreign keys.

Therefore, we consider the second tone *e* as fifth of the chord *a-c♯-e-g*, in order to modulate into *D* minor. Being once in *D* minor, we might accompany the *e* of the sixth measure with the chord *a-c-e*; but since it is our object to go with the next tone into *F* major, we prefer the chord *a-c-e*, because it prepares by its *c* this modulation. The remaining chords require no further explanation.

The chords which we have chosen here, are by no means arbitrary. Thus, for instance, we might have treated the fifth measure, No. 255, as at A, 256 or continued it as at B or C. The reasons for our present selection will become apparent at a future time.

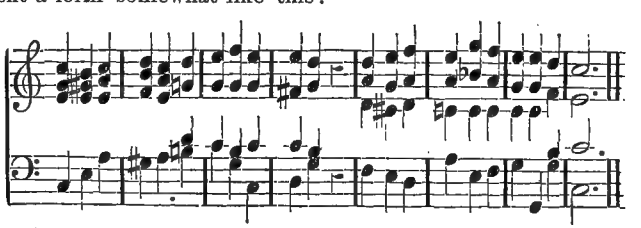
256.



THE COMPLETING OF OUR WORKS.

We will now place our phrase completely before us, in order to attach our further remarks to it. No. 255 would perhaps present a form somewhat like this:

257.



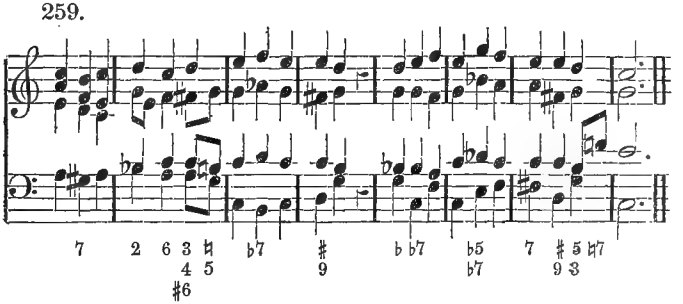
Looking at the harmonic contents of our phrase, we cannot but observe, that we devote more space and time to the foreign keys than to the principal key. We cannot justify this proceeding which

takes away the unity and firmness of the whole structure, except with the plea that it was our object to introduce as many keys as possible.

We must further remark that in finding these foreign chords we have observed a two-fold proceeding. At first we enquired which chord was suitable to this or that particular tone of the melody, and retained the key into which we were led by the selected chord. Then again in the antithesis, we consulted what keys we had already employed, and selected those harmonics which would bring us into the other nearest-related keys.

Finally, it is clear that the above treatment is by no means the only one possible. With the aid of foreign chords and their inversions, the harmonization might be varied almost to infinity. It is not easy to introduce a new chord, without its influencing the treatment of the whole phrase. Here, for instance we give a treatment which does not even begin with the tonic triad.

259.



No sooner had we touched the keys with flats (2d measure), than our whole thoughts turned to these. The thesis closed upon the dominant it is true, but not before a chord from *C* minor found room, and the antithesis touched upon *G* minor, *F* minor, and *F* major.

The third tone of the second measure has two chords (and consequently two figurings) beneath it, This is no fault, for we can rhythmically dissect every tone and treat it as tone-repetition.

The penultimate chord had necessarily to be a triad, because the resolution of the preceding chord required such a one. But in order not to lose the dominant chord for our final cadence, we

have led one of the intervals of the triad into the seventh (*f*), and thus satisfactorily ended the phrase.

Figuring of two or more chords.

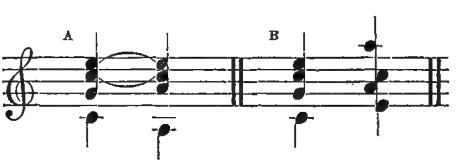
How can we indicate that a bass tone contains two or more harmonies? By double or triple figuring in succession. For distinctness sake the triads, on such occasions, are also indicated (by 3, $\begin{smallmatrix}5\\3\end{smallmatrix}$, $\begin{smallmatrix}8\\5\\3\end{smallmatrix}$, though they do not absolutely require it.

We have already, at a former opportunity drawn the attention of the pupil to a false relation, which, with foreign tones often finds its way into our harmonies. (Page 166.)

It is technically called CROSS RELATION (*mi contra fa*), and has given ample opportunity for the writing of volumes.

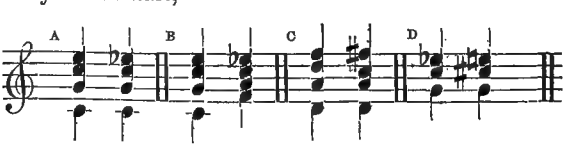
Though the pupil who follows our principles in the conducting of his voices need not fear the occurrence of such relation, we cannot pass this subject without devoting to it a few remarks.

Proceeding from one chord to another which has one or more notes in common with the first one, it has generally been our rule to retain such notes in that or those voices in which it or they first appeared. Thus, for instance, we consider it better to write as at A,



than to write as at B.

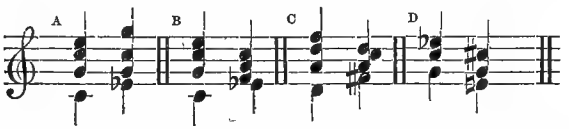
Now, if the succeeding chord brings us a degree which already existed in the former chord, save that it is now raised or depressed by accidentals,



we also consider it best to give such an altered degree to that voice which had formerly the original degree. For this reason

the notes *e*♭, *f*♯, *e* and *c*♯, appear in the same voices (treble and alto) which formerly had the notes *e*, *f*, *e*♭ and *c*.

But the moment we deviate from this natural proceeding, and give the altered degree to a different voice from the one which had the original,

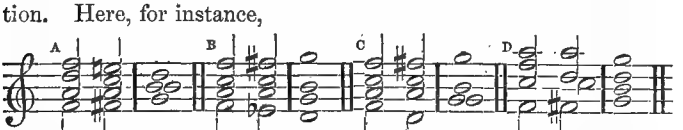


the voices have no longer a flowing and natural progression, and stand to each other in an unnatural relation. Thus at A and B the treble seems to stand in *C* major, while the bass is in *C* minor. At C the treble stands in *D* minor, while the bass stands in *D* or *G* major. At D the treble indicates *C* and *D* minor, while the bass stands perhaps in *C* major.

Such equivocal relation of one voice to another is called a *cross relation.* Former theories have laid much stress upon this matter and have earnestly and anxiously warned against it. *We*, however, need attach no such importance to this matter; not merely because our manner of conducting voices avoids such relations of itself, but also because we never decide one-sidedly, and may have reasons occasionally to permit such cross-relation These reasons we will now point out.

A cross-relation is disagreeable, because the voices do not progress flowingly and naturally, and because the key of the one contradicts that of the other voice. Whenever such is *not* the case, or when the harshness of this relation corresponds to our design, or, finally, when by the passing annoyance we gain a greater advantage, we shall unhesitatingly *permit* such cross-relation.

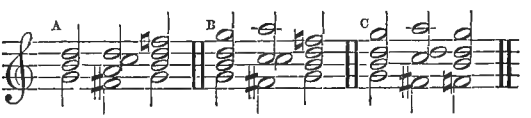
In pointing out the admissible cross-relations, we meet first those cases in which the degree to be altered exists in two voices at once, and consequently can submit in one only to the alteration. Here, for instance,



at A, the upper voice cannot go to *f*♯ with the lower voice, without making octaves. Having once admitted the doubling of *f* in

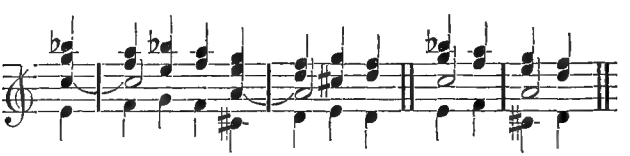
the first chord we must of necessity lead the two *f*s in different directions. The same is the case at B, C, and D. But it is exactly because of this necessity and because the voices are led as naturally and easily as possible, that this progression is permitted and can hardly be counted among the cross-relations.

This relation is also covered or smoothed over, when the contradictory tone has the appearance of a newly entering voice, as at A,

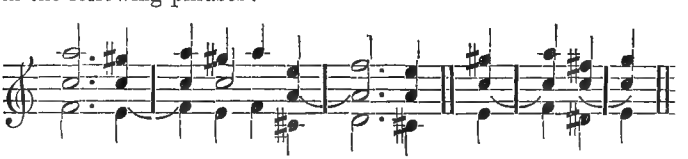


or when the two opposed voices indicate different, but near-related tones, as at B. At C, however, we can see how easily such cross-relations can be avoided and how much milder and flowing the modulation can be made.

A similar state of things is, when the cross-relation occurs in chords which belong to different phrases or sections.

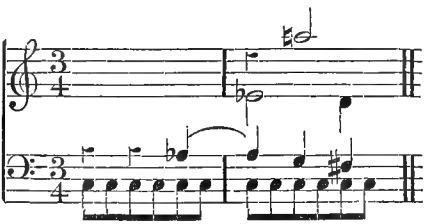


Here, in the first example, four and four chords constitute a phrase, and consequently the cross-relation of *c* and *c*♯ is admissible, because they belong to different sections. In the second example we consider two and two chords as different links, and permit the *c*♯ of the second link as a newly entering voice. If in either case the rebellious tone is conceived more distinctly, it serves only to more plainly distinguish the sections. The same occurs in the following phrases:



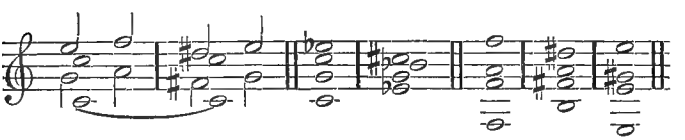
We have now proved that a cross-relation, with all its harshness, can be even desirable, as the only right expression, when it

is our object to introduce a voice decisively. As a further illustration, we quote here a passage from Mozart's Quatuor in *C* major which of late has been the theme of earnest discussion among German and French theorists. Mozart commences thus:

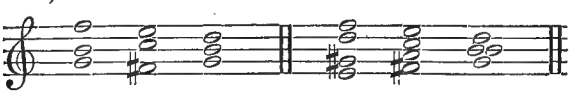


in a mysterious, gloomy manner, before entering the fresh *C* major. The second entering voice leaves us uncertain whether *c-f-a♭* (*F* minor), or *c-e♭-a♭* (*A♭* major) will appear. The succeeding voice decides for the latter, and with the next voice (the treble) Mozart breaks this harmony at once, and keeps us in anxious uncertainty, until with the sixth quarter-note he turns decidedly to *G* major, the dominant of the principal tone, and then continues. Who perceives not that this piercing tone—it forms a cross-relation with the preceding *a* of the second voice—is absolutely proper and indispensable to the idea of the composer? If Mozart had resigned the *a♭* or the *a♮* of the higher voice, the character of his phrase, and the analogous succession of his voices would have been lost.

For the same reasons cross-relations are well applied, when we use them in slow harmonic sequences and sharp and weighty modulations, for instance,

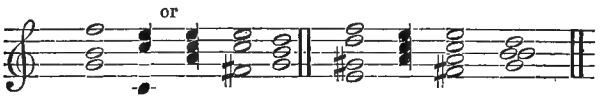


In rapidly succeeding modulations, also, particularly in a flowing progression of the voices, the cross-relation seems to lose its harshness,



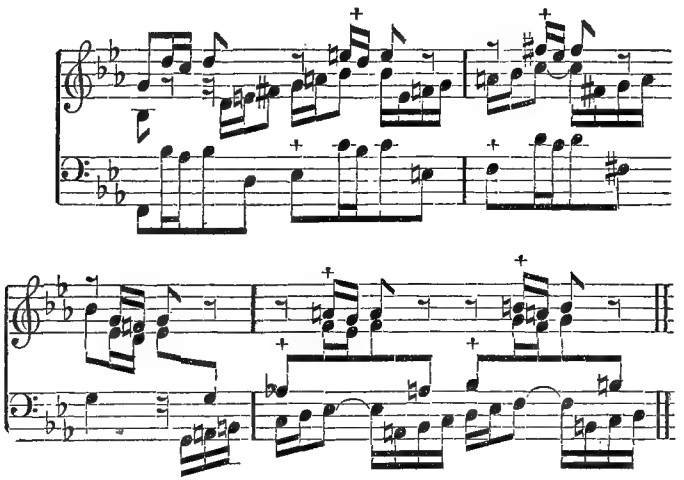
because the change of modulation occupies the hearer, and such

progressions (which are based upon the omission of the resolution-chords) have of themselves a certain strangeness which well



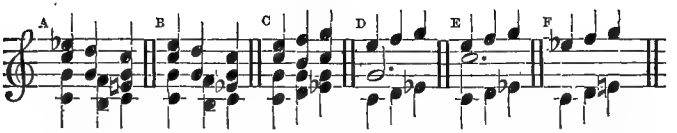
corresponds to the character of the cross-relation.

And thus we understand why cross-relations are permitted which, considered by themselves, are actually strange and contradictory, but which are the unavoidable consequences of a proper and well constructed progression of the different voices. As one of many instances, we give here a passage from a fugue in *C* minor, by Sebastian Bach.



It is evident that the cross-relations marked †, could not be avoided without sacrificing the upward pressure from *d* to *e*♭, *e*, *f*, *f*♯, *g*, and again from *g* to *a*♭, *a*, *b*♭, *b*, in the lower and middle voices, or the spoiling of the upper voice.

Until now we have only spoken of cross-relations between two chords in immediate succession; but the same relation can extend above the second to a third chord, and in such case it is called an *indirect* cross-relation. Here



we see a series of such movements which act upon us as cross-relations, and of which the first (A and B) are less distinct than those at *c* and *d*, because the cross-relation in the latter is in the outer voices.

Why does not the intermediate chord destroy the harshness of the cross-relation?

Firstly, because the flowing voices *e♭-d-c*, *g-f-e*, &c., are recognized at once as phrases belonging together, and because *e♭-d-c*, as well as formerly, is considered as a melody of *C* minor, while *g-f-e* belongs to *C* major. For the same reason the phrases E and F, in which passing-notes take the place of intermediate chords, make no favorable impression.

Secondly, because the dominant chord is not sufficient to distinguish major and minor, belonging as it does to both modes.

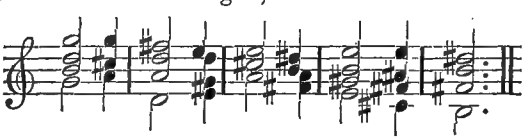
CHAPTER III.

FORMATION OF NEW PASSAGES WITH THE AID OF FOREIGN CHORDS.

Every introduction of a foreign chord can be considered as a *new* harmonic design, and can be employed by itself, or in connection with other chords, for the formation of new passages. We know already how to go to work; and we require only a practice of the same, in order to become familiar with the various chords. For this purpose only we give below a few examples.

We have already been made acquainted with the modulation in the dominant. Continuing it, we

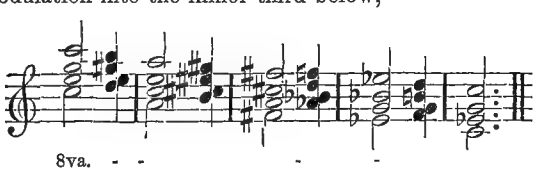
259.



ascend from every new key into its dominant. Simultaneously with this, the chords change in positions and inversions, and it is easily seen that the same can be done in various manners.

The modulation into the key of the minor third above, issuing from *C*, would lead us to *E*♭, *G*♭, or *F*♯, *A*, and back to *C*. The modulation into the minor third below,

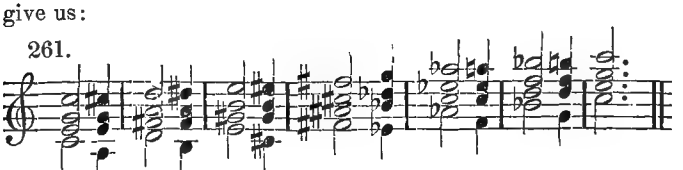
260.



would lead us from *C* to *A*, *F*♯, *E*♭ or *D*♯, and back to *C*.

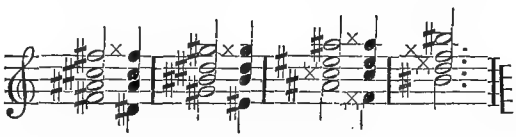
The modulation to the key of the major second above, would give us:

261.



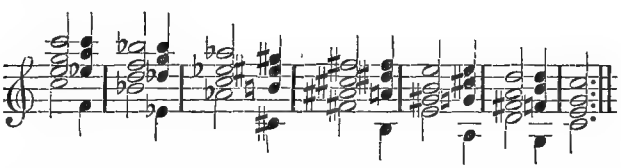
In the fourth measure the dominant chord ought to have been *d*♯-*f* × -*a*♯-*c*♯, which would have led us to *G*♯ major; the continuation would have been thus:

262.



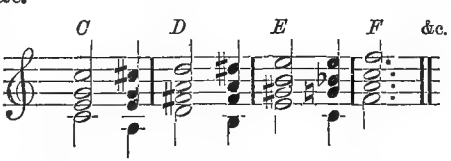
and would have brought us *G*♯ major with eight, *A*♯ major with ten, *B*♯ major with twelve sharps, and would have involved us in an infinity of signatures. Instead of this we have enharmonically changed the above chord into *e*♭-*g*-*b*♭-*d*♭, which has brought us into keys with less signatures. The same occurs in the modulation to the sub-second:

263.



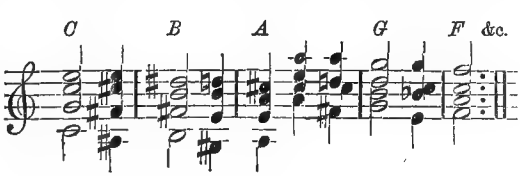
The beginning of No. 263, and the ending of the last passage remind us of our first harmonic lesson; the accompaniment of the ascending and descending major scale. While until now we have moved voluntarily into any key, we can now consider the degrees of the scale as just so many tonics into which we modulate. In other words, we go from *C* major to *D* major, *E* major, *F* major, &c.

264.



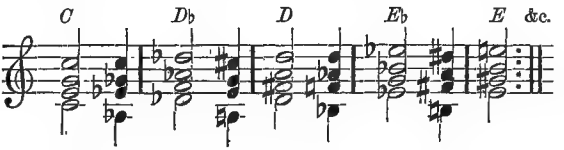
or, *vice versa*, from *C* to *B*, *A*, *G*, *F*, &c., placing these tones either in the upper voice, (as in No. 264) or in the lower voice, as below:

265.



or into another voice, and regulate the remaining voices accordingly. Or, we take the ascending and descending chromatic scale,

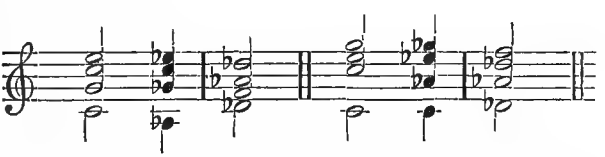
266.



and write our chords now with sharps, now with flats, as may be most convenient to us.

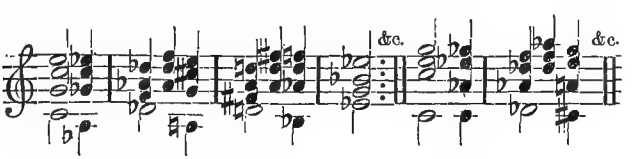
It is clear that such exercises can be extended infinitely, and to exhaust them is almost impossible. But we recommend the pupil to practice these modulations and passages as much as possible in all positions, on paper and (improvising) on the piano. The different positions will often present difficulties to him, because in ascending modulations some of the tones strive downward, and *vice versa.* Thus No. 261 and 264 were comparatively easy, because we always returned to the same position, and a single design sufficed to carry us through. In No. 265, too, we could have finished as we began, and we only changed the position (2d measure) in order to get along with one stave. But in No. 266 it was different. Placing the first triad in a different position, we are absolutely forced to place the second triad again in a different position.

267.



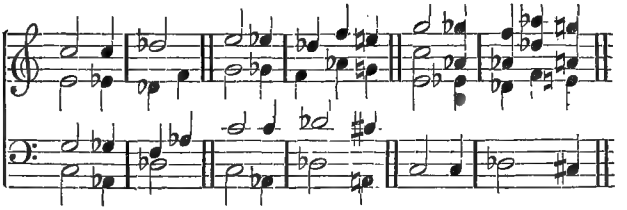
If our former advice (the consistent continuation of every design to a well formed whole) is now heeded, the very mastering of those difficulties will furnish new designs. As an illustration we give here No. 266 in other positions.

268.



Here are the beginnings of the same in dispersed harmonies,

269.



which, like all the former, we leave to the pupil to carry through.

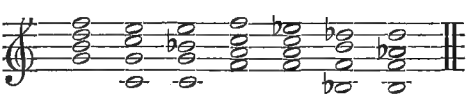
The practice of these passages must not be limited, however, to the dominant chord, but should include all the other transition-chords.

Thus far, though we have discovered extended combinations, we have obtained nothing essentially new. We will now proceed to the actual new formations.

I.—PASSAGES OF DOMINANT CHORDS.

We can consider the dominant chord as a major triad with added minor seventh, and consequently can change every triad into a dominant chord. Here

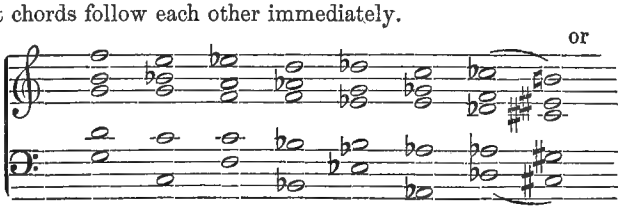
270.

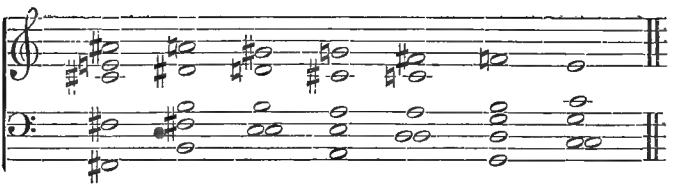


we have regularly resolved every dominant chord into the triad of its tonic, and every triad has been changed into a dominant chord—a passage which we owe to the introduction of foreign chords.

But since every dominant chord contains within itself already a triad, we can reject all the triads of No. 270, and have the dominant chords follow each other immediately.

271.





Here we see every tone follow its regular progression, with the exception of the third, which descends a semitone, and becomes the seventh of the following chord.* We have written the above for five voices, in order to avoid the irregularities which we encountered on former occasions, and yet to obtain perfect chords. If it were our object to have the above passage tetraphonous, it would be best to omit either the third or fourth voice.

2.—INDIGENOUS PASSAGE, DERIVED FROM THE ABOVE.

The above passage drives us from dominant chord to dominant chord, and with it from one key to another, in rapid progress, but without unity of key. Strictly speaking, it is nothing but the foreign tones which occur at every new chord, which destroy this unity. Let us attempt, then, to retain the passage, at the same time voluntarily rejecting the foreign tones, by omitting the accidentals.

* The above results of the analogous development of the harmonic element are already indicated in the natural development of the tonic element.

Already (page 75) we noticed that after the first six tones which nature had given us, and which stood in the simplest relations to each other, (1, 2, 3, 4, 5,) for instance,

c, e g, $\bar{c}$, $\bar{e}$, $\bar{g}$,

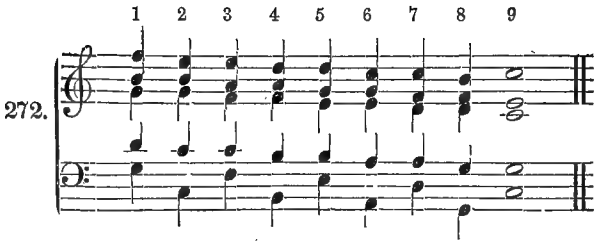
a seventh tone made its appearance, for which *then* we had no name, and after which only, the other tones,

$\overset{\pm}{c}$, $\overset{\pm}{d}$, $\overset{\pm}{e}$, &c.,

made their appearance.

This seventh tone, (the tone relation 6, 7,), though lower than our *b*♭, and higher than *a*, must and can serve us as *b*♭.

Now we know that the second harmonic mass, or the dominant chord *g-b-d-f*, has a predisposition to resolve into the first harmonic mass, or the tonic triad, *c-e-g*. But in the same instant, by means of the just mentioned *b*♭, the chord becomes anew a dominant chord, (*c-e-g-b*♭,) which resolves into a new tonic, (*F-c-a*.) Thus the nature of the tonic element strives of itself downwards, in the same manner as we have illustrated it in No. 271.



Here, amidst familiar chords, we also discover some new ones. *Familiar* to us, besides the final chord, are

No. 1 and 8, dominant chords, with major third, major fifth, and minor seventh.

No. 4, a chord which at a first glance might be taken for a nonachord with omitted fundamental tone. If such were the case, it would have resolved into *c-e-g*, not *e-g♯-b*, or *e-g♯-b-d*. But No. 270 has taught us already that it is nothing but a voluntarily-altered dominant chord, and as such its progression, as it appears in No. 272 is perfectly proper.

New, beside this one, are

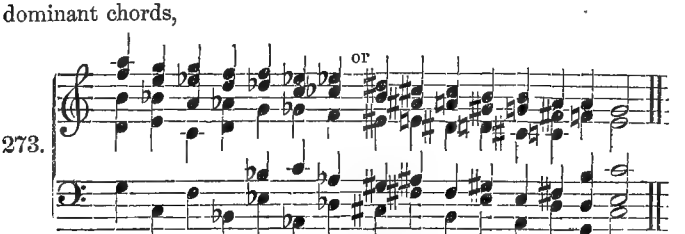
No. 2, and 3, two chords with major third, major fifth, and major seventh, and

No. 5 and 6, two chords with minor third, major fifth, and minor seventh.

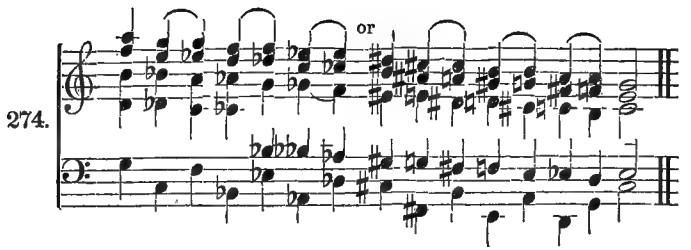
Being nothing but voluntarily-altered dominant chords, their progressions are those of dominant chords.

3.—SUCCESSION OF NONACHORDS AND SEPTIME CHORDS, OR NONACHORDS ONLY.

According to the above, it requires but the mentioning, that nonachords also, instead of resolving into triads, can resolve into dominant chords,



or even into nonachords—

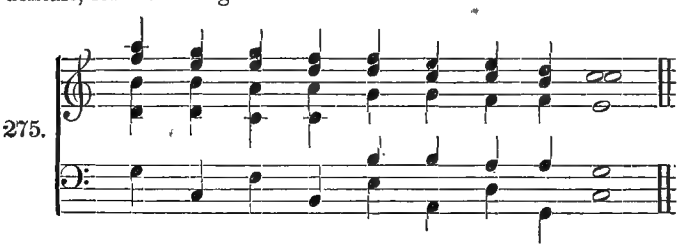


274.

The latter can take place, either in major and minor nonachords alternately, (as in the above) or in a steady succession of either major or minor nonachords, which is left for the student to practice.

4.—INDIGENOUS PASSAGE OF NONACHORDS.

In the same manner in which we formerly gained an indigenous succession of septime chords, we can here, by omission of accidentals, form an indigenous succession of nonachords.



275.

Amidst two familiar nonachords, Nos. 1 and 8 we find here several *new* ones, *viz.:*

Nos. 2 and 3, consisting exclusively of major intervals.

No. 4, exclusively of minor intervals.

No. 5, with *minor* third, *major* fifth, *minor* seventh, and *minor* ninth.

Nos. 6 and 7, with *minor* third and seventh, and *major* fifth and ninth.

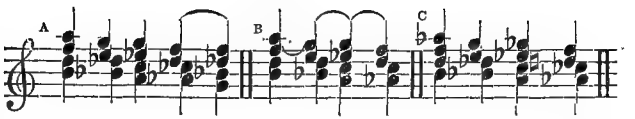
These chords require no additional rules. They are treated like unaltered major and minor nonachords.

From each of the above nonachord successions, we can develope

5.—SUCCESSIONS OF DERIVED SEPTIME CHORDS.

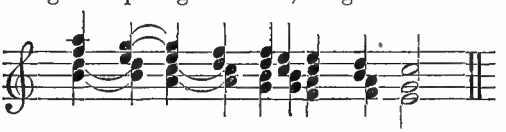
Thus from No. 274, we gain

276.



the passage A—from a succession of major nonachords the passage B—from a succession of minor nonachords the passage C—and from the indigenous passage No. 275; we gain the following:

277.



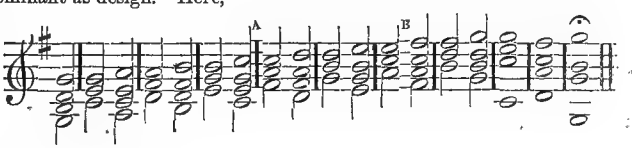
which, however, as is easily to be seen, brings us nothing new.*

How to despoil all these passages, and particularly those of the nonachords, of their superfluous tones, and how to carry them through their various positions, is left to the student's own industry.

But let us consider once more that all the above passages, and the many that might be developed from them with so many new chords have all arisen

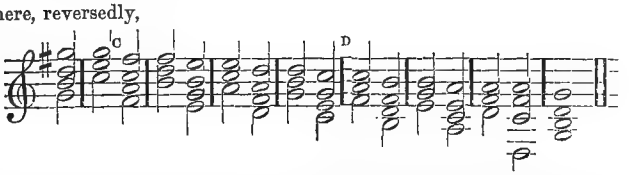
* Here, at last, we have an opportunity to introduce an appendix to the passages discovered. (Page 119.) Then, particularly in Nos. 134 and 135 we took the step into the dominant as basis; now we take the step into the subdominant as design. Here,

278.



and here, reversedly,

279.

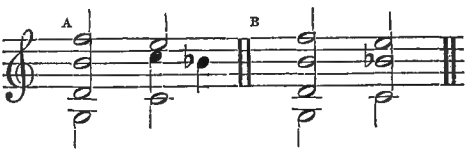


we have carried the design straight through. But is it proper at A, B, C, and D, to deviate from the rules of the dominant chord and the dominant triad? to omit the resolution of *f♯-a-c* into *g-b-d*? to have the seventh *c* ascend to *d*? to double the third, or to lead it now above, then below?

These deviations, too, like those in No. 271, and similar ones formerly mentioned, are hidden and justified by the analogy and the firm progression of the whole passage. At A and B the actual resolution-chord occurs—merely later and in a different position—and we shall soon learn that this is the case too at C and D.

FROM A SINGLE DESIGN,

i. e. from succession of two dominant chords—or more properly from the PASSING OVER A SINGLE TONE—that, in No. 271, instead of taking *c b♭* as at A, we have taken *b♭* at once, as at B,

280. 

and we have again an illustration of the infinity of that tonical development in which every step brings us a new series of formations. Considering again that so many septime and nonachords, together with the diminished triad, obey

A SINGLE LAW,

which, though given only with the dominant chord, was already indicated in the second harmonic mass and the second position of the scale, we cannot but acknowledge the intrinsic unity which runs through the whole tone-development.

We can, therefore, justly call the dominant chord

THE ORIGIN OF HARMONIC MOTION.

Its first inclination is towards the tonic, to which it drags the nonachords and all the derived chords; then, it leads us with its appendix from one key into the other; finally, after its once renouncing the return into its tonic, its motion is unbounded; for each of the passages originating from it, finds in its elements neither rest nor end, but drives us incessantly through all the degrees of the scale, until we arbitrarily rest, or seize a tonic harmony. Equally just is the designation of the tonic triads

AS SEAT OF REPOSE.

They are the goal, the actual *end* of all harmonic motion, as they (particularly the major triad) were the *beginning*. They, *for themselves*, have no stimulus for motion; each stands there by itself, without the necessity of moving into another chord. Therefore, with the exception of the dominant chord, they produce no new chords, and no necessarily connected harmonic passages; their most flowing combination, the sext chords are merely *melodically* (by the parallel direction of all or most voices), not

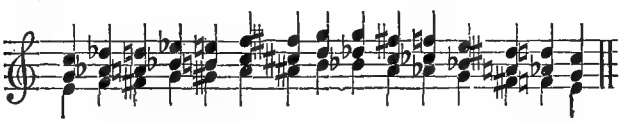
harmonically connected; for none of its chords has a tone in common with the next succeeding one.

Now, for the first time, we can fully appreciate the name

DOMINANT.

The tone so called reigns over, and leads every tone-combination and tone-motion; it is the centre around which from the two first harmonies to the end of all tone-motion, harmonic sequences and modulations turn.

The greatest motion of the triad we can oppose to it and its harmony would be a succession of sext chords, diatonic as in No. 167, or chromatic, as here

281. 

But in the latter case it is evident that the stimulus of this motion is not properly harmonic, but merely melodic. The chord *c-e-g* has no relation to *f-a♭-d♭*; consequently no inclination to move into or towards it. The separate voices only move diatonically or chromatically up and down; but exactly because of the regular manner in which this is done, the chords which they form are at least melodically connected.

CHAPTER IV.

VARIABLE MODULATIONS.*

By this name we shall designate such means of modulation as can lead into more than one key, according to the view which we take of their relation. We turn our attention here particularly to two chords.

A.—*The diminished septime chord.*

Of this chord we said already, (page 169) that it is the clearest designation of a key; clearer than the dominant chord because it designates even the species of key, (major or minor) while the dominant chord leaves the species undecided.

But owing to a peculiarity of which we shall speak now, this very chord becomes what we just designated a means of variable modulation.

The diminished septime chord, as we know, consists exclusively of minor thirds, for instance, in *C* minor of *b-d*, *d-f*, and *f-a♭*. When we invert this chord, (for instance, place the *b* above *a♭*), the two tones form the interval of a superfluous second, which is equivalent to a minor third. Now, when this inverted tone, *b* is enharmonically changed into a minor third *c* we have again a succession of three minor thirds, *d-f*, *f-a♭*, and *a♭-c♭* instead of *b*; consequently a new diminished septime chord, which is only distinguished from the inversion of the first (quint-sext chord) by the name of one tone, but by no means in the actual pitch or tone-contents. And since this proceeding can be applied to every diminished septime chord, it follows,

1. That the inversions of the diminished septime chords sound like a fundamental chord.

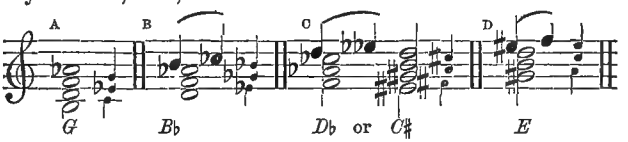
2. That every inversion of it can be considered as a new diminished septime chord.

3. That every diminished septime chord contains in its tones three others, that consequently there are only *three tonically* different septime chords in our system, while of every other species of chords can be found TWELVE.

* See Appendix G.

The first can be said of no other chord; the second causes that with every inversion, by merely changing a name, we arrive in a new key. Here, at A,

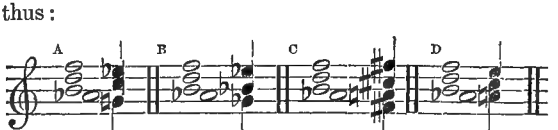
282.



we see the diminished septime chord, *b-d-f-a♭*, leading to *C* minor. At B we see the quint-sext chord of the same, *d-f-a♭-b*, by the enharmonic change of a single note *b* in *c♭*, assume the form of a new diminished septime chord (*d-f-a♭-c♭*), which leads us to *E♭* minor The quint-sext chord of this new septime chord (or the terz-quart chord of the first) is again (at C) enharmonically changed into a new diminished septime chord, *f-a♭-c♭-e♭♭*, which would lead us to *G♭* minor. But in order to facilitate the writing of it, we change the whole chord enharmonically into *e♯-g♯-b-d*, and arrive thus in *F♯* minor. At D we take the quint-sext chord, *g♯-b-d-e♯*, (sounding like the second inversion of our first chord) change the *e♯* again into *f*, and thus obtain the fourth septime chord, *g♯-b-d-f*, which leads us to *A* minor.

Now, since neither change of name nor inversion alter the actual effect of the chord, we can represent the same results at once, thus:

283.



We need hardly mention that these modulations can be effected in every inversion and every position, and that each of these septime chords can lead to major as well as minor. The industrious student will practice all.

To the above three observations we will now add a fourth one, equally simple and productive:

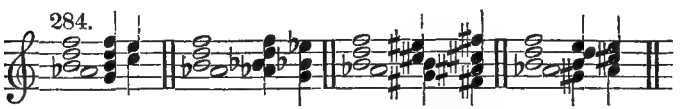
"The seventh of the diminished septime chord (the minor ninth of the nonachord), has its position a half-step above the octave; therefore, if it descends a half-step it would fall into the octave."

Consequently every diminished septime chord can, by means of

the descension of the seventh, be changed into a dominant chord, (or rather a quint-sext chord of the same), for instance *b-d-f-a♭* in *b-d-f-g*.

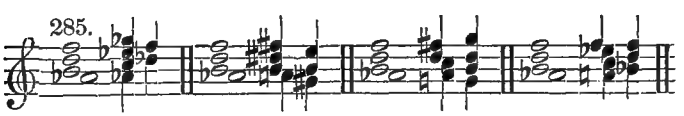
This gives us the above four modulations with a circuitous course of the dominant chords,

284.



Here we have obtained the above results by lowering one tone of the chord, consequently increased the distance of it just so much from the other tones. But the same is the case when we retain one tone and elevate the three others a half-step. This gives us four modulations,

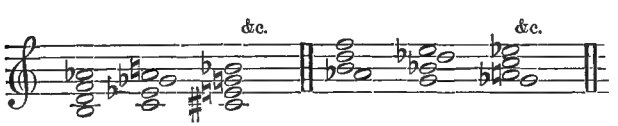
285.



to *D♭*, *E*, *G*, and *B♭* major or minor.

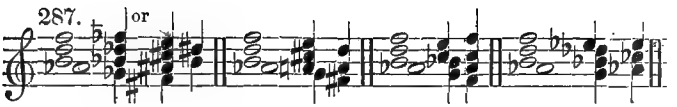
Here we have led upwards three tones of the chord; we will now attempt it with *all four tones* down or upwards,

286.

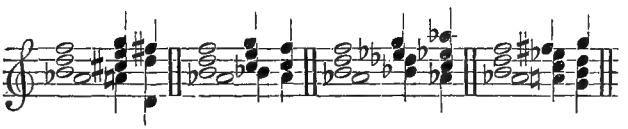


leaving it to the student to carry it out through the various positions. Here, be it observed, we meet again upon harmonic passages or sequences, the single chords of which have as little relation to each other as those of No. 167 and which are admissible on account of the then-mentioned melodic connection.

With every step we arrive here at a new diminished septime chord, with which we can repeat the operation of No. 281. If this were the case, the seventh would *twice* descend a half-step, (once according to No. 286, and again as in No. 284), the other tones would follow as in No. 286. Let us do this *all at once*:—The seventh may descend a whole step, and other tones a half step; this gives us four new modulations to *B*, *D*, *F*, and *A♭* major or minor.

287. 

Of course the same proceeding can be carried out in an opposite direction; one tone may ascend a half-step while others ascend a whole step.

288. 

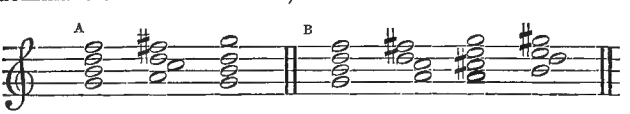
Here we have again four new modulations to *D*, *F*, *A*♭, and *G*, and it remains for the student to carry it out in other, perhaps more favorable positions.

Thus the simple diminished septime chord leads us immediately, or by means of an assistant chord into all twelve major or minor keys, and to most of them in more than one way.

B.—*The dominant chord.*

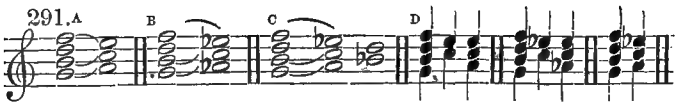
Already in Nos. 154, 155, and 188, our third and seventh of the dominant chord have risked, under cover of the remaining voices, some deviating steps; at No. 271 we have arbitrarily changed the resolution of the third, and thus have arrived at a new dominant chord, and consequently at a new key (that of the subdominant).

Let us now pursue the opposite. We proceed (at A) from one dominant chord into another, *viz.:* that of the dominant.

289. 

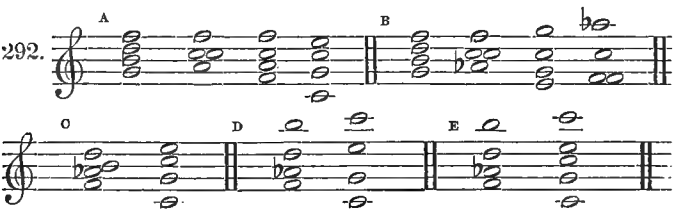
The third pursued here its natural course, but the seventh was elevated, and the fifth and fundamental tone have also pursued a different course. This proceeding is based more upon our pleasure than any law of nature, and is only admissible because of the near relation of key. It is but rarely that a continuation of the same (as at B) is applicable.

But we will attach to these some other nearer deviation.



At A *f* goes properly to *e*, *b* to *c*, *d* to *c* or *e*; it seems as if it were going to be *c-e-g*. But *g* goes to *a*, and in-instead of the tonic triad, we have the triad of *a* before us, which, perhaps, remains *C* major, perhaps causes an actual modulation to *A* minor. In the same manner at B and C, we resolve the dominant chord into *c-e♭-a♭* or *a*, instead of *c-e♭-g*. We might excuse these deviations by imagining them as omissions of *c-e-g*, or *c-e♭-g*, as illustrated by D; but the near relation of the keys justifies this proceeding in itself.

We will now add to these deviations a few *free resolutions* of the dominant chord and the diminished septime chord, which might have been mentioned earlier, but will certainly be better comprehended here.



At A the seventh of the dominant chord remains, while the other tones pursuing their regular course, form with it another chord, until finally in the last chord the seventh obtains its due. At B we neglect even this; for *g-b-d-f* apparently proceeds to *F* minor, while in reality we merely go to the subdominant of *C* minor. At C, D and E, the fifth *f* (the seventh in the nonachord) does not pursue its natural course to *e*, but goes far beyond into the fundamental tone. By this means we are enabled to double it. (E) *

* See Appendix H.

CHAPTER V.

GENERAL ORDER OF CONSTRUCTION.

THE last and most important use of modulation into foreign keys, consists in its enabling us to form more firm and more extended constructions, than we could formerly, in the compass of a single key. Though this is rather too soon to think of compositions which require a more firm and extended modulation, we will take the opportunity of exhibiting at least its principles.

The harmonies of one single key permitted us in reality nothing more than to form *a period* of thesis and anti-thesis and coda or codas. In the duophonic composition we elevated this thesis and anti-thesis to a first and second part; but this, in reality, is a mere extension of compass. The first part was only rhythmically satisfactory; in tonical respect it was by no means so well constructed, for its end we had merely the half cadence on the second harmonic mass.

But this second mass has long since become the triad of the dominant which reminded us of the key of the dominant and served as close of the thesis. There remains now for us but one step; we take instead of the mere triad of the dominant, the *key* of the dominant for the close of our first part. Thus anticipating, we have already, in No. 257, closed the thesis with a modulation into the dominant; but the close was rhythmically imperfect. Here we have then

A.—*The first perfect construction of a two-part composition.*

The first part, as a whole, ends with a full cadence; but this cadence is not in the principal tone, but altogether in another key; and thus with all its completeness at the close, it still does not end satisfactorily, and leads us to expect a return to the principal tone.

And now comes the *second part* as something expected, and leads us back to the principal tone, in order, there to end the whole satisfactorily.

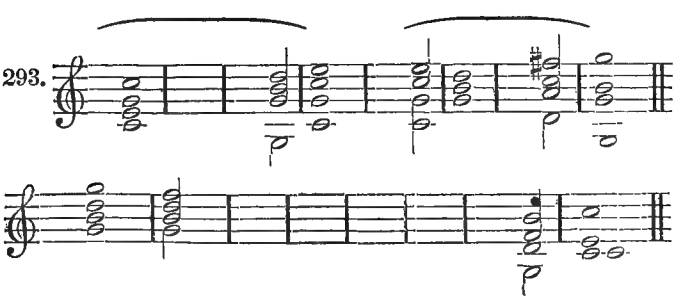
The first is *progression*, elevation into a higher key; the second part has the *return* to the principal key. It is therefore again the fundamental form of page 81, though carried out with higher and richer means.

The above is the general rule for major. Thus the first part of a composition in *C* major will end in *G* major. This is the nearest, and sufficient until larger and freer formations lead us further.

In minor, this modulation from minor to minor would add gloom to gloom; for the minor triad, as we have seen already, is neither clear nor sure like the major triad, but as it were, has been developed from the latter by the depression of the third. That which characterises the triad is characteristic of the key also. Nor is the minor key so intimately connected with its dominant as the major key. For instance, in *C* major, the dominant triad *g-b-d* indicates at once the key of *G* major. Not so with minor; for the actual triad of the dominant in minor, (for instance in *A* minor *e-g♯-b*) by no means indicates the minor mode of the dominant.

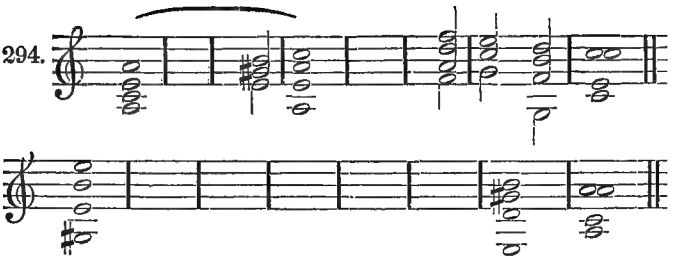
Therefore, the modulation in minor does not *generally* turn into the minor mode of the dominant, but prefers to go into the nearest-related major key; for instance, from *A* minor to *C* major. This is the regular progression of the modulation, which we shall follow until weighty reasons and more extended formations justify us in deviating from this rule. Our first construction in two parts would therefore be represented in the following sketches For major—

293.



and for minor—

294.



The two parts appear here in the original length of 8 measures each; the first is divided into thesis and antithesis, of the second we know not yet whether to give it such a division or not. The tonic harmony begins here the first part: it is needless to repeat that we might also commence with another. The thesis of the first part, according to rule, ends in the principal tone. After that we leave the principal tone and move towards a higher key in which the part is to end.

B.—*Second two-part construction.*

We have now, by means of a full cadence, made a whole of the first part. But this whole, in its nature, is one-sided; a continuous elevation—a start, as it were up to the final point. It is true the second part brings a second motion; *i. e.* back to the quiet of the first beginning. But the second part is to a degree separated from the first. Thus the character of the first part disagrees with the meaning of a close, which ought to be quieting and soothing.

How can we now unite these two essentials—the elevation of the first part and yet a satisfactory close? According to the fundamental principles of all tone-motion, the close ought to fall into a tone *lower* than the one in which the movement led it. But we cannot alter the close, without falling back upon the principal tone. Consequently the alteration must take place in the movement of the first part.

We lead the movement

BEYOND ITS ACTUAL GOAL,

from *C* major, for instance, to *D* major; aud now we can *fall* upon the actually wanted key of the dominant, and have thus

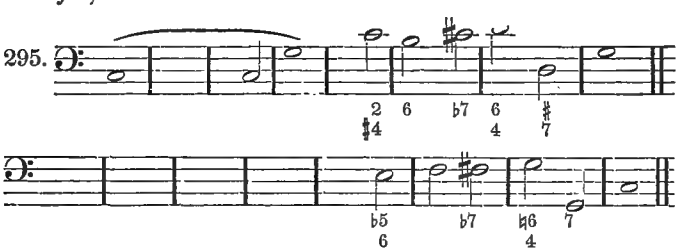
united elevation and depression, and gain a perfectly quieting, soothing close.

If the same proceeding should be applied in minor, the modulation must first be led into the dominant of the parallel key, and finally into the latter; in *A* minor, for instance, first to *G* major and then to *C* major. But this impulse seems here to be less forcible; for the elevation in minor rests less upon the elevation into a *higher* key, than upon the transition into the clearer and more vigorous major.

In the *second part*, also, we discover now an unsatisfactory movement towards the end. The second part follows its original destination, to the quiet of the principal tone. But it would be better if, as the actual ending of a whole, it had somewhat more vigor and decision. It ought to contain an *elevation* and still fall upon the principal tone.

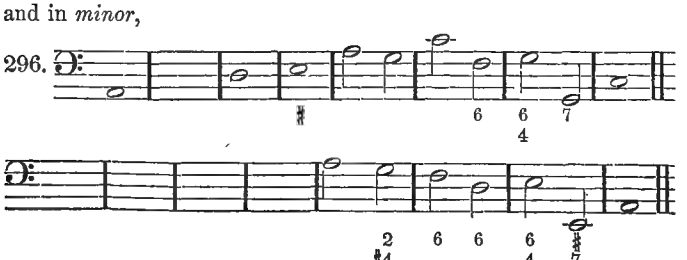
In order to achieve this we pass on to the subdominant, (too *low*, in fact) and now we can effect an *elevation* into the principal tone. Below we give a modulatory sketch for constructions in *major*,

295.



and in *minor*,

296.



C.—*Further extension of modulation.*

Until now we have combined the principal key with the key of

the dominant, or with the parallel key, as the nearest and most appropriate steps. Afterwards we introduced the dominant key of the dominant, or of the parallel, and the subdominant.

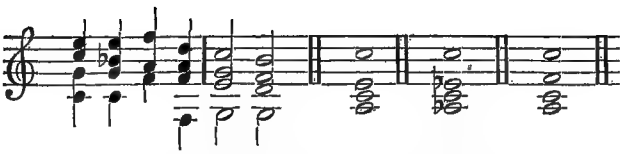
If we were to go still further, we would again seize the nearest related keys; these are the parallel keys of the principal tones and of the two dominants. But we know already that we can choose more distant keys without touching upon the nearer ones.

Our present means are by no means so profuse that they should require a further extension of modulation. The second manner of construction, or even the first, will be perfectly sufficient; only in passages (sequences) we shall be able to use richer and more extended modulations. The unity of our well-rounded phrases would be destroyed by too great an abundance of modulation into distant keys.

But if it is our object to give to these phrases a richer and more extensive modulation, at the same time avoiding the danger of vagueness, we have but to remember the already mentioned CODAS, (page 86) which might repeat the final phrase, with or without alteration. By such a proceeding we not only gain on space, but the very repetition serves to strengthen the ending. In that case a more digressive modulation is less objectionable, because whatever in it leads away from the principal tone, is made harmless by the repetition of the ending, which of course makes the principal tone again more conspicuous.

D.—*The interrupted cadence.*

Formerly we had for our codas (page 86) no other means of connection than to represent the first ending imperfectly. Now, the licenses of the dominant chord give us new means to avoid the actual close in the principal tone, and to introduce the coda, or codas, until finally we end with a full and perfect cadence. For this purpose we make use of one or the other of the free resolutions of the dominant chord. Thus, for instance, after a full preparation of a close in *c*,

297. 

we could go to the triad of *A* or *A*♭, or to any chord which would bring with it a coda, and finally a principal cadence. We know already (page 86) that we can apply two or more codas in succession, and that they can be effected by renewed avoidance of the final cadence. Such preventive cadences are called "Interrupted cadences." The imperfect cadences, too, which we have formerly (page 118) seen, belonging to this category, when they take the place of a perfect cadence and cause the addition of a coda.

CHAPTER VI.

ABRUPT MODULATION.

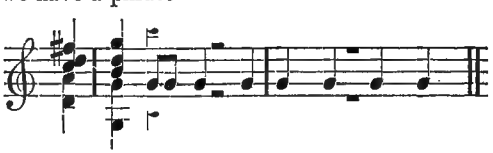
The different manners of modulating which we have learned thus far, are fully sufficient for all the constructions capable of being formed with our present means. But since our object for the present is to prepare means and foundations for future, more extensive formations, we will pass our self-proposed boundaries in order to produce such new formations as can easily be derived from what we have learned.

Until now we have effected our modulations by chords which signified more or less distinctly, that we had left the one key and modulated into another. By the transitive chord we renounced, as it were, the key which until then was the field of modulation; at the same time our transitive chord had always more or less connection with the preceeding chords. If we had ended the first piece, instead of modulating into another key, we could have begun a second piece in any other key without the necessity of a modulation.

From the above we conclude that—when a phrase ends, as it were, a succeeding phrase, as if it were a new one, can, without transition, begin in another key.

Here we have a phrase

298.



which ends in *G* major. One voice only retains a tone in some rhythmical form or other; in other words, we have to expect after the end, a continuation, a new phrase, or perhaps a mere repetition of the former one, and the retained tone is the connecting link between the two phrases. This tone, without reference to its former harmonic relation, can now become a fundamental tone,

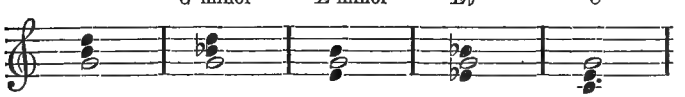
third, fifth, seventh, major or minor ninth, of any septime or nonachord in which it is inherent, and consequently can prepare SIX different modulations, each to major or minor;

299. C A♭ F D or B♭ or or B.

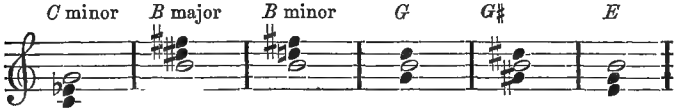
At No. 298 we retained the fundamental tone; but we could also have retained the third or fifth, and applied it in the same manner. This gives for the three tones *eighteen* modulations, less one; for the fifth considered as fundamental tone of the dominant or nonachord leads into no new key.

But since we considered the phrase No. 298 as concluded, we require no transition; the retained tone can immediately again become fundamental tone, third or fifth of a new tonic triad, in a new key.

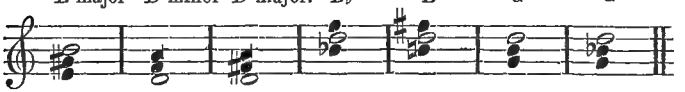
G minor *E* minor *E*♭ *C*



C minor *B* major *B* minor *G* *G*♯ *E*



E major *D* minor *D* major. *B*♭ *B* *G* *G*

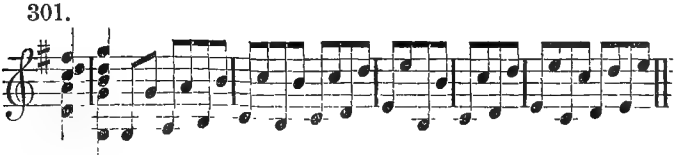


This gives us again *twelve* modulations (not counting the repetitions of those already counted) into major or minor.

In all these cases, it is true, the remaining tone was the connecting link of the harmony. But we have depended more on the fact that the previous phrase was closed, and that the harmony had ceased.

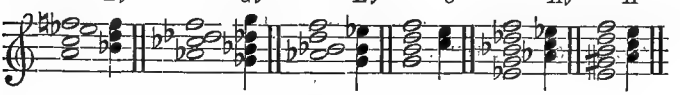
We will now in reality depart for a time from the harmony. We will change No. 298 into the following,

301.



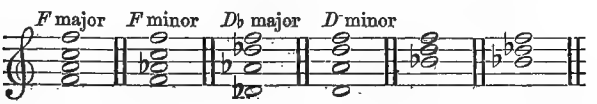
and after the perfect ending of the harmony we continue in a monophonic or octave passage up to any particular tone, in this case it would perhaps be *f*. This *f* can again be part of a dominant chord, a nonachord, or any chord derived from the former two; and thus we could have after the above passage transitions into six different major or minor keys.

302. *B♭* *G♭* *E♭* *C* *A♭* *A*



Or the same tone can at once be part of a new tonic triad,

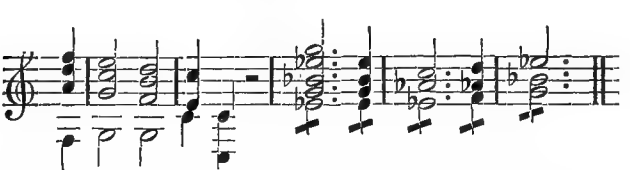
303. *F* major *F* minor *D♭* major *D* minor



and, therefore, again lead into three major or minor keys, among which there are four which we have not reached in No. 302. And since we are not absolutely bound to attach our new phrase to the tone *f*, since we can stop at any tone of our tone-system, it is evident that there exists no key which could not in this manner be attached to the preceding one. But all these harmonies and keys, at which we arrived in Nos. 300 and 302, have not the slightest harmonic connection with the preceding chord *g-b-d*. They are justified by this very disconnection, by our *purposely* resigning the harmonic connection, and they are connected with what preceded by the mere thin thread of the melody.

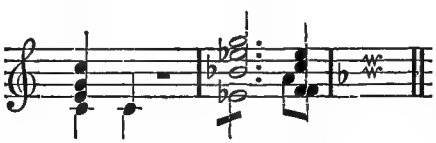
At last we have arrived at the point where we can resign even this last connecting link, and enter a foreign key *without any mediation*.. Here is an illustration.

304.



The second measure closes in *C*. The cadence is full and perfect; the rhythm only leads us to expect a continuation. And immediately we continue, without preparation, in a foreign key. By

what right? Because this continuation is a phrase by itself, as it were; a new piece which takes up the thread of the previous phrase at a different place, and perhaps in a different sense. And it is exactly because the continuation in the third measure is considered as a new phrase, that we consider the new chord *E*♭-*g*-*b*♭ at once as a tonic chord, though the key of *E*♭ is only indicated by the dominant chord *b*♭-*d*-*f*-*a*♭, which occurs three notes later. If the continuation should not correspond with our expectation, if we should continue thus:

305. 

and turned to *B*♭ major, we should still consider the first chord as tonic of *E*♭, and the second as a *second* modulation into *B*♭ major.

CHAPTER VII.

ORDER OF MODULATION FOR MORE EXTENDED COMPOSITIONS.

One more rule can be derived so easily from the previous principles of modulation, that we retain it at once, though its full importance will only become evident in more extended forms. It has reference to the order of modulation which should be observed in forms which combine several phrases in various keys into one whole, and is a continuation of the fifth chapter, in which we mentioned the order of construction for compositions of two parts.

At that time the transition in major into the key of the dominant or parallel was the means and sign of the close of a part. The seizing and combining of various keys gains additional importance, when several phrases are to be connected in one piece, or when others have to be repeated in a different sense. In such a case every key mentioned in the laws of construction becomes in time the field for a new phrase, and influences its relative keys.

At first appears the *actual principal key*, and demands room for development. If the association with another key is absolutely necessary we must take the subdominant, for the dominant will soon be a principal sphere.

After this comes the dominant as principal sphere of modulation, preceded by *its* dominant. Its subdominant is the principal key itself, which has just been passed, and will return again at the end; and consequently would be altogether unnecessary here. Therefore, if we must extend our modulation we shall have to select the parallel of the dominant, as its nearest relation.

The third principal sphere belongs to the key of the subdominant, which prepares (page 200) the close. An extension of modulation in this third sphere would lead us to its parallel; for, its dominant would be the principal key, which must follow soon after under any circumstances, and its subdominant would lead us off too far, without bringing anything new. And now shall this parallel occur before or after the subdominant.

We would prefer the latter, because we cannot reach the parallel without passing through the subdominant, and can only be comprehended as belonging to the latter. But this analogical position would place a new key where we want it least; where the elevation from the subdominant to the principal key is of importance. And this must decide us to have the subdominant preceded by its parallel.

The close, of course, is made in the principal key.

There is but one relative key which we have forgotten thus far—the parallel of the principal key. It would be proper to attach it to the principal key, either at the beginning or at the close between the subdominant and the principal key. At either place it would stand in the way of proper elevation. Its best position would, therefore, be where all the parallel keys meet; here we find a mass of minor modulations which, by the intervention of the principal parallel, becomes first duly organised.

As a summary of all the above we give now a diagram for the order of modulation in major.

Major.	Minor.	Major.
C major, *D* major, *G* major,	*E* minor, *A* minor, *D* minor,	*F* major, *C* major.

Everywhere we have an analogical progression, sufficient connection, and, in the combination of major and minor, a simple and vigorous distribution of masses. Were we to break up these major and minor masses, and intersperse them at random, none of the keys would achieve its full efficacy, and the modulation would become unstable and restless.

The order of modulation in MINOR, naturally resists such a sure and simple combination, corresponding thus perfectly with the gloomy and undecided character of the minor keys (page 202.) The cause of this lies in the fact, that, immediately after the principal key, the second sphere is occupied by a key of a different mode. To this parallel key we could attach the dominant, (or rather the parallel of the principal key's dominant) and afterwards the dominant of the principal key itself. Then the key of the subdominant and its parallel would naturally follow, and we would have the following diagram:

A minor, *C major*, *G major*, *E minor*†, *F major*, *D minor*, *A minor*,

in which we perceive at once that the parallel of the sub-domi-

nant (at †) does not attach itself as easily as the others;—this might be obviated by placing between them the principal key, or by omitting altogether the disturbing key, or in various other ways.

Both these orders of modulation have another property, which gives freshness and decision to their effect.

Each key, with the exception of the principal key, *appears but once.*

It follows from the whole tendency of our work, that these orders of modulation are by no means absolute laws, but that other, deviating orders can also be attempted. But the principle will remain the same throughout. The last particularly, the non-repetition of a key, can rarely be neglected without serious disadvantage. If we deviate, therefore, from the above, and give to any key a different position, we must take care to adjust the other keys accordingly. If, for instance, we concluded to end a first part of major in the parallel instead of the dominant of the principal key, that parallel must not occur again afterwards, though the dominant would find a position at some other place. The following order would perhaps come into existence:
C major, *A* minor, *D* minor, *G* major, *E* minor, *F* major, *C* major. Passages, whose object is merely to touch the harmonies of different keys, as a matter of course, are not tied to this order of modulation. Keys, too, which are merely passed over can occur at any place.

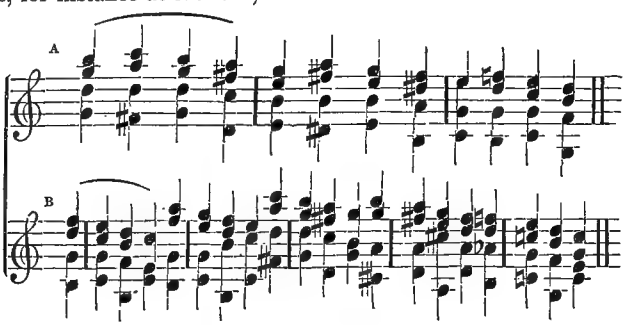
But let us consider now from a different point of view what we have achieved by our order of modulation. Not merely the passages lead us through different keys, but the actual spheres of modulation are different keys, and each one fills an important part of the composition: the thesis of the first, and the anti-thesis of the first or second part, &c. The whole composition, as it were, is merely an extensive passage—simply its aim is fixed.

PASSAGES OF PHRASES.

In reality, No. 266 is already such a passage; it consists not like others, (for instance, No. 270), of a series of well connected single chords, but of two and two harmonies: the dominant chord and the succeeding triad. In like manner each phrase, by repeti-

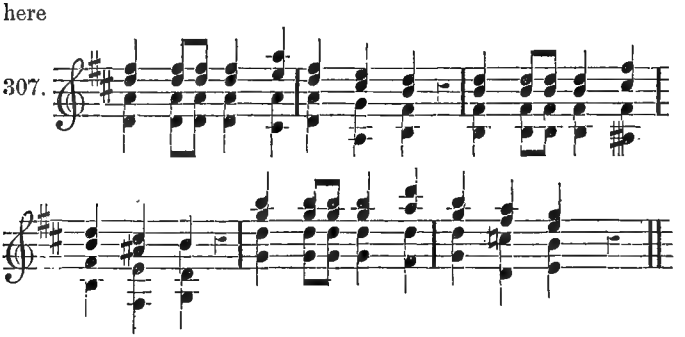
tion on different degrees, can be made a passage, or a phrase chain. Here, for instance at A and B,

306.



we have such chains before us, each consisting of a combination of four chords. Phrases of greater length, as a matter of course, can also serve as designs for such chains. Thus we have here

307.



a passage before us, the phrase of which originated from the design, No. 306—A, and which regularly descends a third. But even here we see, already, that phrases which are well rounded in themselves, do not require a frequent repetition. The phrases (No. 306—A and B), were insignificant in themselves, and only the repetition made them a more significant whole. The phrase in No. 307, however, is in itself more rounded and satisfactory; the first repetition makes it more vigorous, and accidentally represents it in minor; the second repetition will already be considered superfluous, and in order to invigorate it anew, we have placed it in a higher octave. It is also apparent, that passages, if formed of more extended phrases, are apt to get too broad and expanded.

CHAPTER VIII.

THE PEDAL-POINT.

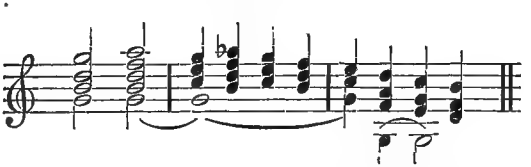
We have now developed a mass of harmonies, and perceived the possibility of combining any keys with all their modulations into a single whole without destroying its unity. But even making but a limited use of these means, there comes into existence a balance of motive power against the calming mass of the principal tone, which is much stronger than that of the scale against the tonic (page 72). At that time we found in the first harmonic mass a succor for the tonic. It is necessary that we should now find a similar succor for the principal tone.

Where is, in reality, the beginning and origin of all motion?

It is in the dominant chord; we have perceived this in our development and have distinctly acknowledged it (page 194).

But the dominant is not merely the basis of the dominant chord, the nonachords and the derived septime chords, but it is also the fundamental tone of that triad which we consider at one time as a harmony of the principal key, at another time as a tonic harmony; it can be fifth of the tonic triad of the principal key, or the basis of a quart-sext chord. It could bear, at least, the following chords:

308.



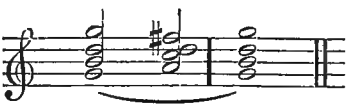
Such an accumulation of harmonies would furnish a much more weighty return to the principal key, than the mere dominant chord, however long continued. But we must proceed.

The dominant chord itself is nothing but an issue from the tonic (page 76) resting upon a tone of its harmony. At page 91 we have already learned to express this origin in tones, and to introduce the dominant chord simultaneously with the tonic:

309.

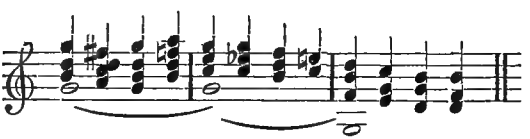
But since every tone can become a new tonic, we can consider our dominant, too, as new tonic, and build upon it a dominant chord.

310.



Only now the dominant has really become a tonic, and we can combine it in this capacity, and in its original capacity (*g* as tonic of *G* major, and *g* as dominant of *C* major,) in the following harmonic formation:

311.



or with the addition of the already known septime and nona successions in a still richer formation,

312.

in which the most essential of all modulations,

The tonic triad as quart-sext chord,

The dominant chord of the principal key,

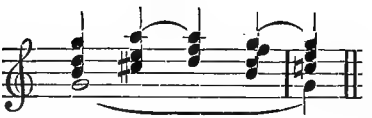
The dominant triad as harmony of the principal key,

The dominant triad as tonic harmony of another key

have been combined.

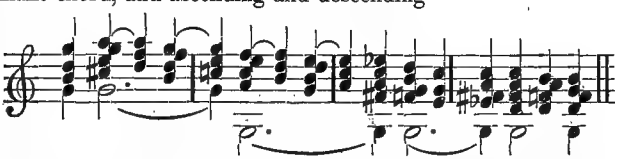
But we have seen already in our order of construction, how the dominant, when it becomes the tonic of a new key, (page 163) brings with it the key of its own dominant; and having just now considered the dominant *G*, as a new key, we can open the way for its dominant.

313.



And thus, chord after chord is drawn into the whirlpool of the dominant chord, and ascending and descending

314.



passages which are a condensed recapitulation of the whole modulation are built upon the single dominant, and are thus led into the tonic harmony of the principal key.*

Such chain of harmony is called a

PEDAL-POINT,

and is the last and strongest means to make a decisive and vigorous return to a principal key, after a rich and extensive modula tion has led us far from it.

While in the pedal-point the chain of chords returns to the principal tone, the sustained bass serves to connect the chords built upon it. Thus we see in the pedal-point, in two respects, one of the most energetic tone formations; firstly as the basis of a well-closed series of chords, working towards a certain aim, and secondly as the connecting link and support of these chords.

It is exactly for this, that the pedal point is only then in its right place, when it is intended to counterbalance a rich and extended modulation; then only the sustained bass serves as a rest ing place for the mind and for the tones.

But as every dominant can stand as tonic, every tonic can stand as dominant; consequently we can develope a pedal-point upon the tonic. Uniting, then, the pedal points of dominant and tonic,

* How can we explain the chord *a-c♯-e-g* in No. 314? By itself, alone, it certainly does not agree with the pedal tone *g;* we can, therefore, only speak of its position in the above modulation.

We have considered the first chord as the tonic of *G* major; consequently the modulation into the dominant of *G* (*d*) was near at hand, and for this we have introduced the chord *a-c♯-e-g*. This chord had necessarily to resolve into *d-f♯-a*, or *d-f-a*. We have selected the latter, the *g* in the bass still remaining, and thus the chord *ġ-b̄-d̄-f̄-ȧ* was naturally presented to us.

315.

8va.

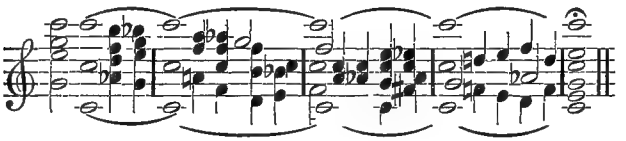
we have at once the fullest and most majestic end. In the above example, in consequence of the profuse employment of the dominant harmony, we have called on the harmony of the subdominant for aid.

This reminds us of that deviation from our principles of modulation (page 211) on the strength of which we placed the subdominant at the beginning of a phrase, in order to obtain a good foothold for an elevation and a richer tone development. Thus the pedal-point, too, can be placed at the beginning of a composition for which we have a rich modulation in view.

We will now set aside object and origin of the pedal-point and confine ourselves to the analyzation of its contents. We can take a two-fold view of it. It is, *firstly*, a series of analogically and successively developed chords, and it is, *secondly*, an independent, sustained tone, which at one time is an essential of the

chords while at another time it is not. Since, when standing by itself, it is an independent voice, we can also double it by means of octaves, without regard to the web of the other voices.

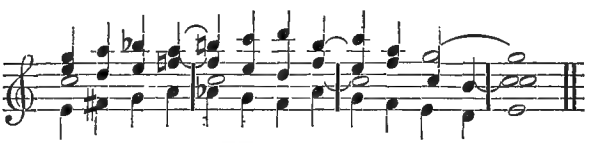
316.



All these octaves are independent of the harmony, but stand merely as a duplication of the original fundamental tone, which, as tonic, reigns quietly over the whole movement.

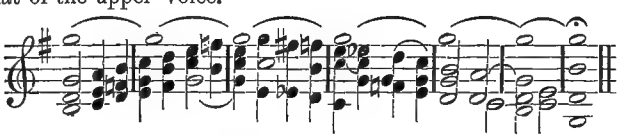
And thus is the inversion of a pedal-point also fully justified. By inversion we mean here that combination in which the original fundamental tone resigns its position in the bass, and occupies the place of a middle voice,

317.



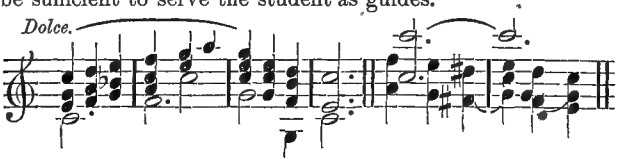
or that of the upper voice.

318.

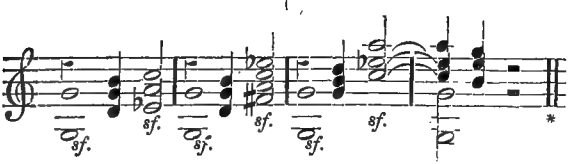


The pedal-point can be employed in every form to more or less extent, and in such a case every tone of the scale can take the place of the tonic or dominant, and become the basis of a pedal-point. Below will be found a few such applications, which will be sufficient to serve the student as guides.

319.



320.



* See Appendix G.

CHAPTER IX.

RETROSPECTION.

A.—*Development of Harmony.*

We stand again at the boundaries of a vast field. A rich and important part of tonical development is spread before us.

The two tone-species and their scales have been firmly established.

The melody has been developed upon a diatonic and harmonic basis, by means of rhythm and the first principles of musical construction.

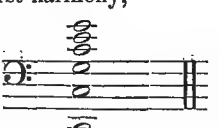
The fundamental forms of musical construction have been indicated.

But most important of all is the development of the chords, as far as it was effected by the triple structure itself, or by such alterations of degrees as were originated by modulation. This development of harmony led us to modulation into foreign keys. The two together engaged us so much that the melodic element, the guidance of voices, had to become subordinate; and also the further development of rhythm and construction had to be neglected.

Let us now glance at our results.

Our rapidly increasing richness has furnished us with innumerable means and ways for the most manifold objects. We should not like to lose any part of them. But the power of our first formations—the meaning and importance of each—exist still.

None of all succeeding harmonies is equal in clearness, dignity, and strength to that first harmony,

321. 

which is the parent and model of proportion for all the others.

The depression of its third has given us the minor triad. Its fifth was the basis of the dominant chord with all its variations and descendants. And thus, gradually, have we been led to the modulation into foreign keys, and have gained means for more extensive compositions.

It remains now for the student to practice on paper as well as at the piano-forte, everything he has learned thus far.

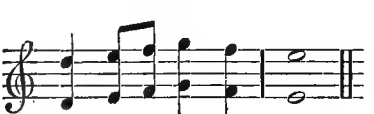
Having arrived at this point of harmonic development, we must look back once more and consider the relation of voices in their progressions with each other.

We have already observed that two voices cannot well progress in octaves or fifths with each other, without injuring the proportions of the whole tone-web. At the same time, however, we have indicated their admissibility for particular objects. In order to arrive at these objects we must first ascertain what such consecutive fifths or octaves in reality express. It is not enough to say they do not sound well. Such principles would degrade music to a mere slave of the senses, while it would prevent mind and soul from taking any but the most superficial interest in it.

If the progression is intended to convey an idea to us, that idea must be interpreted either *rightly* or *wrongly*. This proves, then, that consecutive octaves or fifths, however disagreeable in their effect, can be right at one place, and wrong at another.

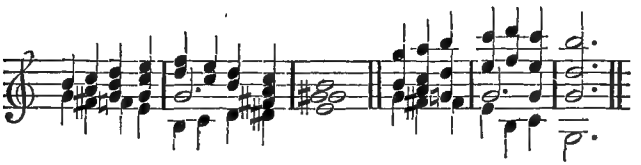
In order to ascertain where such progressions are employed rightly or wrongly, we must therefore, as we have already stated, first know what such momentary parallelism of voices in general expresses.

This is not the place to exhaust such a subject. It is sufficient for us to know that the parallel progression of two voices makes those voices resemble each other, establishes a unity between them, to a greater degree than progressions in different directions. Therefore, two or more voices progressing in octaves

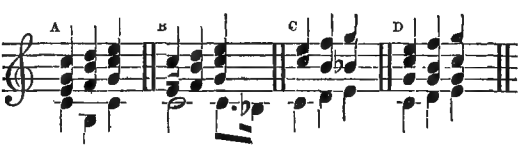


are considered as a monophonic mass; and for the same reason have consecutive octaves in tetraphonic phrases been condemned. For the same reason are the parallel progressions in sixths or thirds (as we find them often in duetts) so well calculated to cement the unity of voices.

In polyphonic phrases, too, these parallel progressions preserve the same characteristics. Thus we perceive in the following, for instance,



that the two upper voices seem to lean on each other, as if they were determined to be reckoned as but one. Therefore all parallel voices are capable of leading us past such progressions as by themselves would be offensive. Thus are the following progressions justified by the parallel directions of two or more of the voices.



But this unity and similarity cannot always be welcome to us. On the contrary, we would probably prefer, particularly in the outer voices, a characteristically-different progression of voices. Besides this, a too great extent or accumulation of parallelisms is apt to produce monotony instead of unity. For this reason have former theorists established the rule, that bass and treble, or lower and upper voice in chorals, should not progress in parallel sixths or thirds.

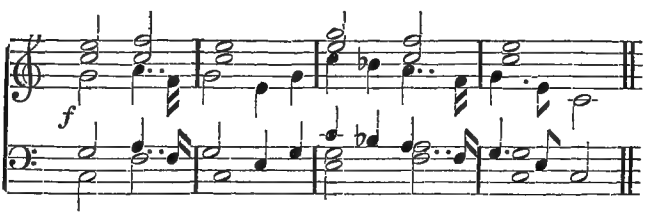
Thus much of the parallelism of voices in general. We have now to consider the effect of two voices, according to the intervals in which they progress. The first of these are

the Octave Parallels,

of which everything most necessary has been said, (page 101, example No. 92.)

We convinced ourselves at that place, that octaves as mere duplications or mere reinforcement, as it were, are admissible;—but that it was quite a different affair when the octaves were formed by such voices, as, according to their position, were evidently intended for an independent path in the harmony. Thus, the alto in No. 92, took its place between the essential voices of the harmony, and though until then an essential voice itself, became merely a duplication of the bass; or in other words made consecutive octaves with that voice.

Here



is a phrase in which the third and fourth voices proceed in octaves throughout. The one is a mere reinforcement of the other; both in reality form but one voice or melody, and answer their purpose full well if it was the composer's object to obtain a broadness of volume which could not be effected by mere stronger enunciation of a single voice.

From the octave parallels we turn now to

the Fifths, or Quint-parallels,

of which, too, we have spoken already, (page 102) and select of them the succession of

Two or more Major Fifths.

We remember that in No. 54 the fifth was the first new tone developed from the fundamental tone, and that the interval of the fifth, for instance,

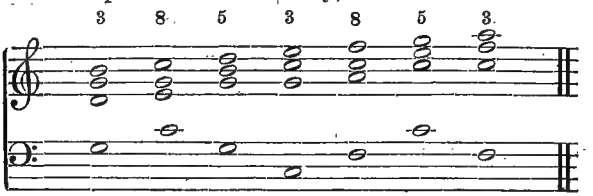
c and *g*,

was the first dawn of harmony; the, as it were, still uncompleted triad,

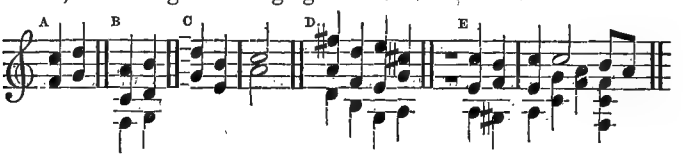
c-g and *e*.

Without entering more deeply upon the meaning and characteristic of this interval, we perceive at least that it represents "the triad" to a certain degree. Consequently a succession of two

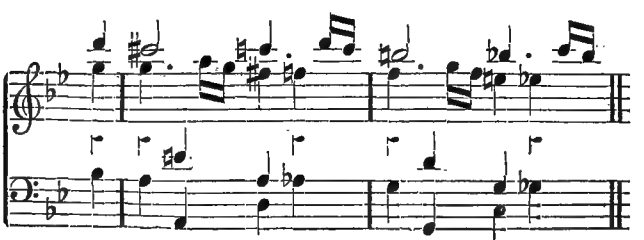
fifths represents to us a succession of two triads, the one appearing exactly in the manner of the other. This hollow repetition must be already displeasing to us when we compare it with the normal development of our harmony,



in which no triad appears in the same position as the immediately preceding one; still more so, when we meet with such repetition, when its ingredients belong to non-related chords; for instance, dominant and subdominant. This explains, then, why one quint-succession can be more disagreeable than another. Fifths, indicating or belonging to non-related chords



(like those at A and B), are more conspicuous and more disagreeable than others, indicating or belonging to related chords, (C, D,) particularly when the faulty chords are separated by a pause, or belong to different rhythmical links (E). Even the contrary motion of the delinquent voices, is sometimes a sufficient excuse for their progression. Thus has Haydn introduced them in the Overture to "the Seasons:"

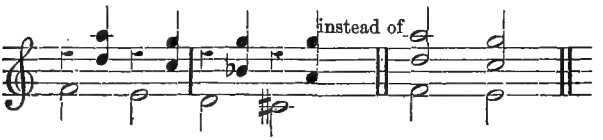


when the two lower voices have the notes

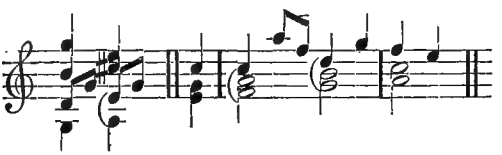
e—a and *d—g*

a—d and *g—c*.

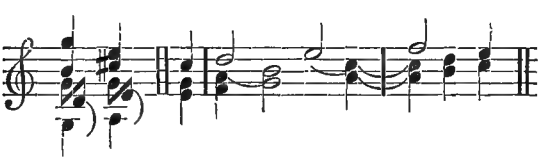
An interruption of the quint-succession by means of rests,



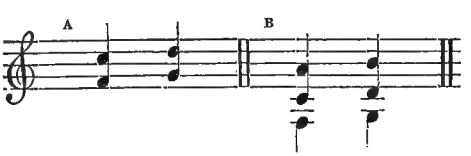
tends also to indemnify us for the fault, as it interrupts or hides in a degree the connection of the harmony. Intermediate tones, too, tend to mitigate the effects of such succession,



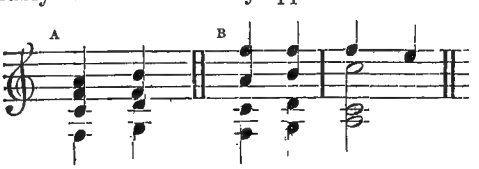
and particularly when the fifths fall on the unaccented parts of the measure, as in the following:



Another kind of mitigation is when the other voices insure us that not the chords indicated by the fifths, but others, well connected, succeed each other. Thus, the unpleasantness of the measures A and B of the following,

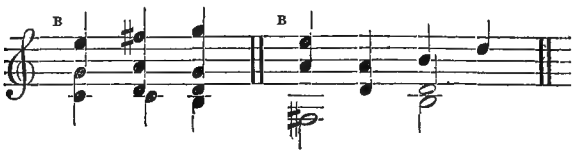


is considerably softened when they appear thus:



Still less unpleasant are such successions when they are hidden

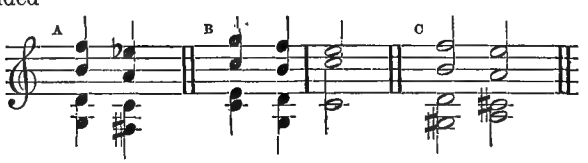
by a flowing progression of the voices (A), or when the two fifths can be considered as essentials of one chord (B).



This, we hope, will be sufficient for a subject which for years has set our theorists at loggerheads, and has caused the most contradictory rules. We have perceived that the prohibition has its good reason, and that we are always able to avoid consecutive fifths, if we wish to. But we must always remember, that an abstract rule can spread much mischief, and that quint-successions are not only sometimes admissible, but actually the only right way of expression. We shall, therefore, attend for the time to these prohibitions, if for no other purpose, merely to practice the avoiding of fifths. But this shall not prevent us from using these fifths at a later moment, when we have some particular expression in view.

SUCCESSIONS OF MINOR FIFTHS, (A), and SUCCESSIONS OF MIXED FIFTHS,

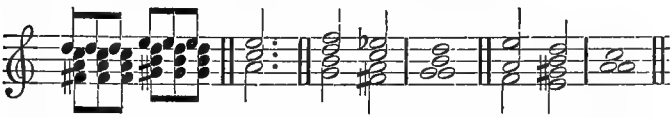
i. e. of major and minor, (B) or minor and major fifths, (C) are not included



in the prohibition, from the very fact that minor fifths do not designate any original chord, though, when a major fifth succeeds a minor, the succession partakes, in a degree, of the disagreeable character of major fifths.

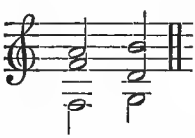
The inversion of a fifth results in a fourth. It is a natural consequence, therefore, that fourths, too, should share somewhat in the inconvenience of quint-successions. It is true we have often made use of consecutive fourths, but never without hiding the obnoxious tones between the parallel progression of the outer voices.

Successions of sevenths and seconds can only occur when one septime chord leads into another; for instance



Successions of thirds and sixths are the most unobjectionable. But we must warn against a too frequent and too long use of them, as they are apt to give to the music an effeminate character.

A succession of major thirds, as we have had it in our harmonization of the sixth and seventh degrees of the scale,



has also been thought objectionable by former theorists; and it cannot be denied that there is something harsh in this succession. But if the chords are otherwise well-connected, this harshness becomes much less perceptible, and often, too, such harshness can be the very representative of an artistic idea.

In short, we will always guard against that effeminacy of mind which makes us hesitate at every full and vigorous expression, and which always deceives itself, because the anxious listening to every strange tone or chord leads us to suspect something wrong or bad, which in reality does not exist.

Eighth Part.

Displacement of Chords.

CHAPTER I.

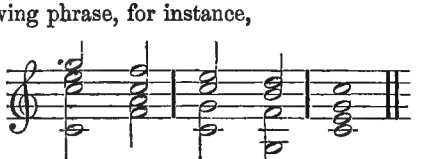
SUSPENSIONS FROM ABOVE.

However richly our harmony has been thus far developed, there remains still a certain monotony in our compositions, which is owing to our close adhesion to regularly-built chords. Every tone of our melodies belonged to such a chord, and every chord stands there, independent and well rounded. The consequence of this was that we had to resign all free and animated rhythmization, which enlivened our monophonic and duophonic compositions. One voice was chained to the other, and when one entered a new harmony, the others were sure to follow.

It is clear that the invention of new harmonies does not remedy this evil; for each of these new chords must again be constructed of three tones. But we must take a different view of the harmonic element; we must look upon it as a combination of different voices. From this point of view we discover the cause of our difficulty in the fact that—

All our voices progress *simultaneously* from one chord to another

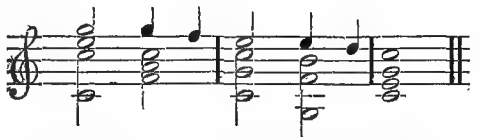
In the following phrase, for instance,

322. 

as soon as the first *g* goes to *f*, all the other tones of the first chord, too, enter upon an interval of the second chord, and thus it continues to the end.

It is now our object to attempt the reverse; the different voices

shall not progress simultaneously. The upper voice, for instance, shall *not* progress with the others.

323. 

The succession of chords remains here essentially the same. The first, third, and fifth chords are absolutely unchanged. The three lower voices are the same throughout. But while these three voices progress from the first chord to the second, the upper voice still holds on to the first chord upon *g*. This *g* does not belong to the same chord, is absolutely discrepant to it, and must, therefore, finally resolve into the proper tone of the chord *f;* and then the discrepancy ceases. But we should not have introduced this discrepant tone, if it had not remained from the first chord and thus become bearable. Its existence in the first chord has *prepared* us to find it still in the second. The same can be said of the *e* in the fourth chord.

A tone, thus stretching from one chord to another, to which it does not belong, is called

SUSPENSION.*

Thus the nature of the suspension itself teaches us when such suspension is admissible.

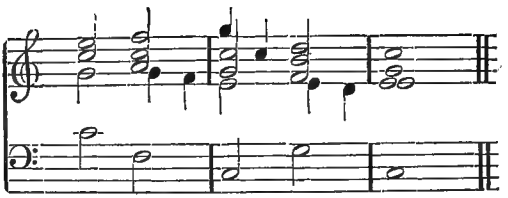
Firstly, the suspension must be *prepared; i. e.*, the discrepant tone must exist in the preceding chord, and must be given to the same voice which forms the suspension.

Secondly, the suspension must be resolved; *i. e.*, the discrepancy between it and the chord must cease, the suspending voice must finally enter upon the proper tone of the chord.

Yet the discrepancy between suspension and chord is not justified; in spite of preparation and resolution, we still hear a strange tone instead of the proper tone of the chord. Strictly speaking, the discrepancy exists between the suspension-tone and that interval of the chord which has been retarded by it. Therefore, in order not to make it too harsh, it is advisable not to introduce the suspension and the retarded interval simultaneously. If, for instance, we were to represent the above phrase thus:

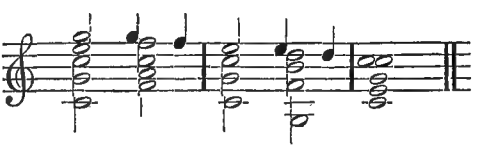
* See Appendix I.

324.



the octave of the fundamental tone (in the second chord) would be suspended, while the same interval would be introduced simultaneously with its suspension, in the upper voice. In the same manner, in the fourth chord, the upper voice has the fifth of the fundamental tone, *d*, while the fourth voice has the suspension *e* to it. The discrepancy of these tones would be still greater, if the disagreeing tones were close together.

325.



We have to make a distinction here between fundamental tone and octave. The octave can be suspended, without interfering with the simultaneously-entering fundamental tone.

Where, now, can suspensions be employed? Everywhere where we can fulfil the above conditions; and with observation of these conditions:

1, in every voice.
2, in every chord.
3, for every tone of a chord.

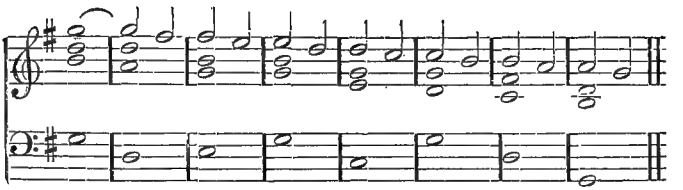
The preceding attempt (No. 323) leads us to one species of suspension which we shall call

Suspensions from Above.

This suspension-tone is one which must descend a degree, in order to resolve into the proper tone of the chord. Consequently every tone of a chord which descends a degree, can be employed for such a suspension.

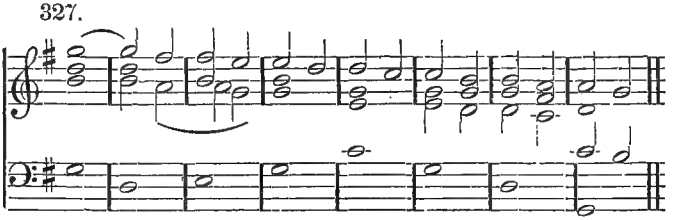
Let us attempt this in our descending scale, and at first with the upper voice.

326.



And now we will introduce all the suspensions possible with these chords.

327.



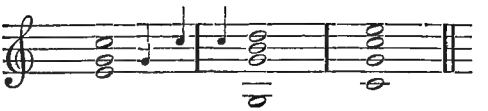
The bass could nowhere become a suspension, because it nowhere descends a degree. For the same reason the alto had to wait until the seventh measure.

We perceive here harmonic formations which, though called into existence by suspensions, resemble some of our former chords as, for instance, the second chord, which resembles a quart-sext chord, while we intended quite a different harmony; the septime chord or triad of *d*. It is quite immaterial whether we consider such formations as chords or suspensions. It is sufficient that we know them, and can call them into existence whenever we want them.

But there are other suspensions which, though resembling former chords, are still treated very differently. Thus we might consider the first tone-mass of the fifth measure as an incomplete nonachord, *c-e-g-b-d*. But in that case it ought to resolve into *f-a-c*, instead of resolving into *c-e-g*. Here, too, this ambiguity need not stand in our way; nay, it is an actual advantage, for it allows us to consider this mass either as one formation or as another.

The introduction of suspensions, thus far, gave us no trouble, because all our voices descended, and were all appropriate for preparation and resolution of suspensions. But how is it with ascending successions? Here, for instance,

328.

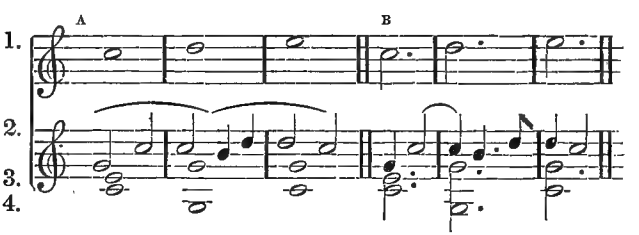


a suspension from above seems impossible, because none of the voices descend.

But if we merely look upon the contents of the chords, suspensions are quite practicable. In the second chord is *b*, which might be suspended by *c*. This *c* exists in the previous chord, but unfortunately it is in the treble, and the treble goes to *d* instead of *b*. In the same manner we might suspend the *c* of the third chord by *d*, but the *d* is again in another voice.

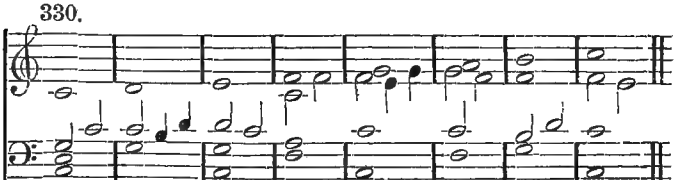
Here, as formerly in No. 95, we give the two tones to one voice. The alto, for instance, takes first *g* and then goes to *c*. We have now two voices which have the tone *c*; but the one goes to *d*, and the other forms the suspension and goes to *b*. Leading this *b* again up to *d*, we are again enabled to make a suspension, because the one *d* goes to *e*, while the other forms a suspension and resolves into *c*. Here

329.



is an illustration of the proceeding. Here, now, is the ascending scale, harmonized in the first manner, with all its suspensions:

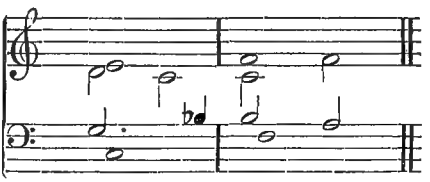
330.



The alto, alone, was able in this succession to form suspensions. If, in the third measure, we had changed the triad into a domi-

nant chord, the tenor would have had opportunity to form a suspension.

331.

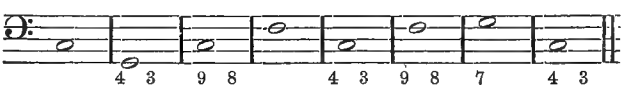


In the penultimate measure, too, the tenor could have made a suspension, if the *b* was not already in the upper voice.

What have we now gained by these suspensions?

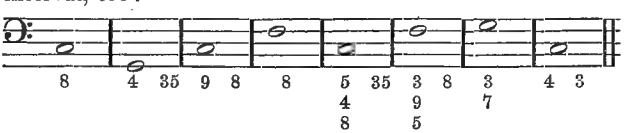
First of all, many new harmonic formations. If we wish to indicate them by figures, we must write the suspension and the resolution under the bass. The above succession would then be marked thus:

332.



Still better would this figuring be if we indicated the preparatory interval, too:

333.



or, perhaps, as in the fifth and sixth measures, the progression of each voice.

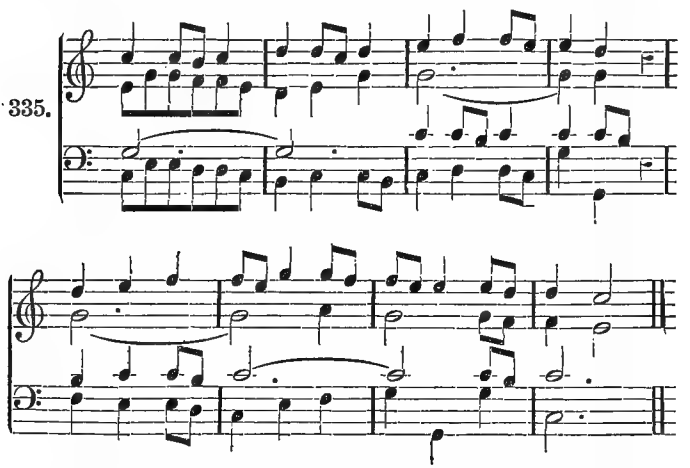
But far more important is the just-beginning liberation from the normal construction of the chords, and the necessity of treating every tone of the melody as a part of such a construction. We have now achieved the possibility of making a tone of a melody somewhat independent of the accompanying chord.

At the same time the voice containing the suspensions has obtained a mobility which we had to resign for a long time. And this mobility is much more intellectual than the mere harmonic figuration of the chord-tones.

Again, the individuality of our voices is much more developed; not merely by the diatonic progression or rhythmization, but by the incongruity of the suspension-tones, and the chord-tones of the other voices.

It is now necessary, above all, to acquire the greatest facility of constructing suspensions, such as we know now. Every exercise we have had or may write, can serve us as basis. It will be advisable to treat first one voice after the other in this manner, and finally all together. As an example we give here, No. 195—B, (2), with simultaneous suspensions in all the voices, as far as they are possible without change of harmony.

335.

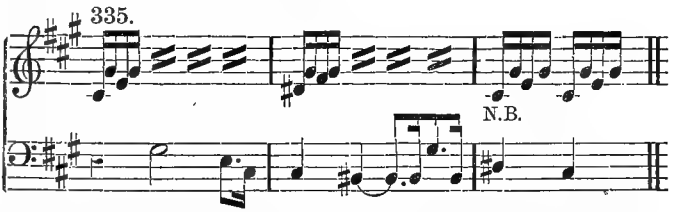


But, however, great the mobility of our voices, and however extensive our means, we are by no means as free as we should like to be, and for this reason we had to introduce the suspensions wherever we could and as many as we could, without having it in our power to obviate the harshness of one, or the meagreness of another. But on the whole we have gained considerably in command of our different voices and their characterization.

Suspension of Fundamental tones.

The suspensions of the fundamental tone of a chord in the bass seem so harsh, that we must enquire whether it is at all admissible to make use of them. The suspension of the fundamental tone in the bass shakes, as it were, the whole formation based upon it. Nor does the bass at all require the melodic finish which is necessary for the other voices. The bass prefers decisive steps, particularly when progressing in fundamental tones.

But in this very consideration lies the proper answer to the above question. When we wish to express a deep emotion, &c., the harsh suspension of the fundamental tone in the bass will be just the thing. Or, if in an excited, agitated mood, the bass should happen to take charge of the melody, as in Beethoven's Finale of the *C*♯ minor Sonata,



it would be cowardly to retreat before a momentarily harsh combination.*

* See Appendix J.

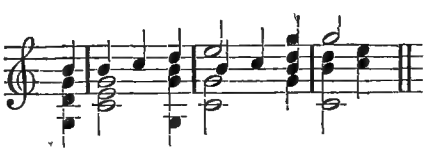
CHAPTER II.

SUSPENSIONS FROM BELOW.

We only acted arbitrarily when we attached our suspensions to tones which descended. It was not in this that the nature of the suspension lay, but merely in the fact that a tone of one chord stretched over into another to which it was not indigenous.

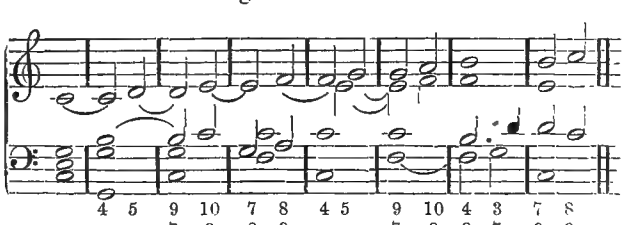
But this can also be the case when the preparatory and suspension-tone is lower, and resolves into the next higher degree. Here

336.



we see the *b* of the first and third chords resolve into the higher *c*; and again we see the *b* and *d* of the penultimate chord resolve into the higher *c* and *e*. These are the suspensions which, in contradistinction to our former ones, we call suspensions *from below*. They require no further explanation. The ascending scale, with employment of these suspensions would present an appearance like the following:

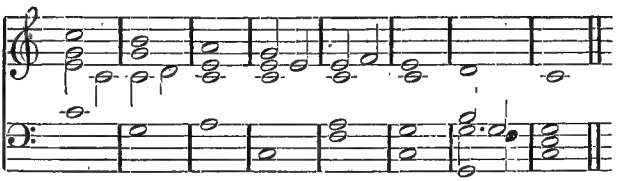
337.



The necessary figuring has been added according to known principles.

In the descending scale, too, we can introduce these suspensions, with proper regard of the necessary preparation, as indicated in No. 330.

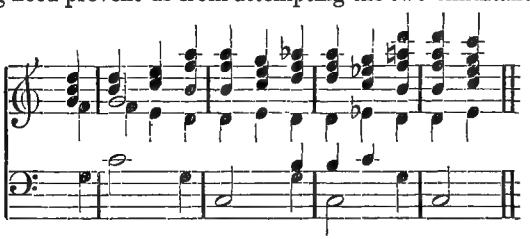
338.



Here, too, we meet with suspensions which resemble some of our former chords. Their treatment, however, proves them to be suspensions.

Having become familiar with these two species of suspensions, nothing need prevent us from attempting the two simultaneously.

339.



Here we have combined suspensions from above and below, and have attached them to our septime and nonachords. By doubling the intervals we have suspended the whole chords, as it were, and the fundamental bass only progresses unobstructedly.

Seventh and ninth become suspensions from above.

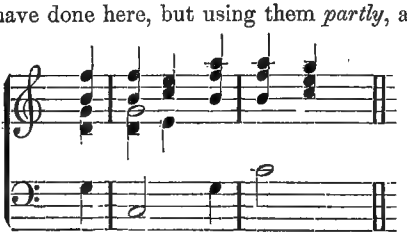
The third becomes a suspension from below.

The fifth, according to its nature, and by means of duplication, becomes simultaneously a suspension from above and below.

The octave, as future fifth, remains.

We need not add that such an accumulation of tones and suspensions may appear overloaded, and we can but rarely employ them as we have done here, but using them *partly*, as here,

340.



they will be of vast advantage to us.

And now we must return to the heading of the whole part,

DISPLACEMENT OF CHORDS.

Formerly we have looked upon the suspensions in a literally melodic point of view, as the most important, and have accidentally acquired some new harmonic formations. Now that we can reconnoitre them fully, and observe their effects upon the harmony, we can see in them

A new means, and the strongest means of harmonic connection.

Next to that most general connection which chords have on account of their intervals belonging to one and the same scale, there were two means of bringing them in a harmonic relation to each other.

Firstly, the mutual tones. But as far as we have seen, they are actually the most ineffective in the new chord. For, on account of their having been in the previous chord, they are less conspicuous than the new tones.

Secondly, the necessary progressions to another chord which nature has given to the dominant chord and all its sub-species, though we have occasionally permitted some deviations from the natural progression.

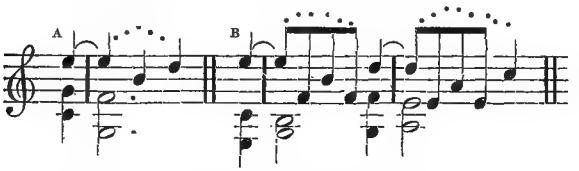
The Suspension combines both of these means, and strengthens them too. The suspension-tone, also, has been retained from the previous chord; but since it absolutely disagrees with the new chord, it monopolizes the attention. The suspension-tone, too, has its decided progression; but in consequence of its disagreement with the whole new chord—as far as we can judge at present from the nature of the suspension—this progression cannot be postponed; the resolution must follow while the new chord is still in existence.

Thus, by means of suspensions, we can form harmonic successions firm, unseparable, soldered one to another, and in this capacity they will be of vast service to us.

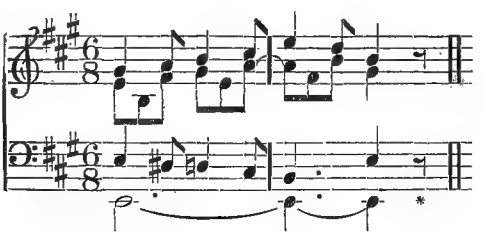
In the course of our instruction we have only spoken of what was absolutely necessary for the occupation of the student; we have not even drawn attention to the fact, that the tone of a melody need no longer be considered as an independent tone of the chord, and that, now, it might be considered and treated as a sus-

pension. But now, that we have done justice to the nearest and most practical object of our instruction, we must not fail to draw the attention of the student to some peculiarities.

The resolution of the suspension was necessary, in order to explain and justify the discrepancy between the suspension-tone and the new chord. But this justification can be postponed, by placing between suspension and resolution another, or more chord-tones. Thus, here



at A, the suspended *e* reaches correctly into *d*, but not before the third of the new chord found its way between suspension and resolution. At B, in the above, we find even three tones between the suspension and its resolutions. Beethoven, in his Sonata Op. 101, has gone even farther.



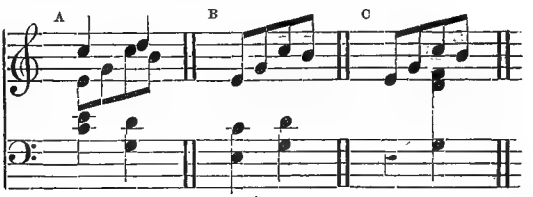
The first measure closes with the quart-sext chord *e-a-c*♯; the succeeding measure begins with the dominant chord *e-g*♯*-b-d*, in which the *a* of the first chord is retained, and must resolve into *g*♯. But before doing this the *a* goes first to the foreign tone *f*♯, then to *b*, and finally to *g*♯. If it were at all important to reduce every new formation to fundamental forms, we might easily explain the above by imagining the chord *f*♯*-a-c*♯*-e*, but the explanation of that *f*♯ is here of minor importance, the retarded resolution of the suspension is our chief topic.

The whole reminds us of the retarded resolution of the third, seventh, and ninth, in the septime and nonachords.

Thus much of the resolution of suspensions. In regard to their

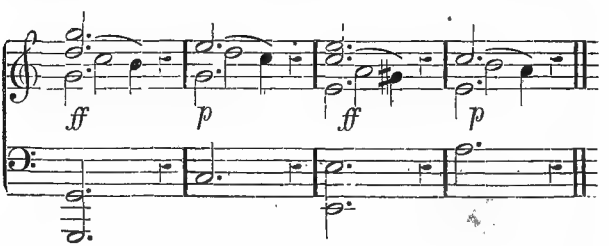
* See Appendix K.

preparation we must remember that a succession can only be understood, inasmuch as its tone or tones have appeared as harmonic tones in a former chord, and have stretched over, as we said before, into the new one. This was in fact, its resolution, and we admitted that it had to take place in the same voice; preparation, suspension, and resolution are in reality nothing else but the peculiar progression of a voice. But now we can derive from it many new and freer formations. Here

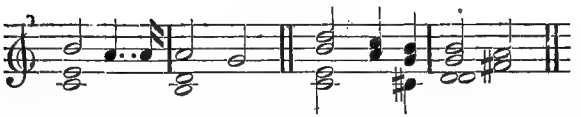


at A, we see the chord *g-b-d* with a suspended *c*; it was in the first chord, even in the same octave, but in a different voice. The suspension-tone at B is not even in the same octave, but in a lower one. At C the suspension-tone does not even exist in the first chord, but our experience and sensation lead us to imagine the chord *c-e-g*.

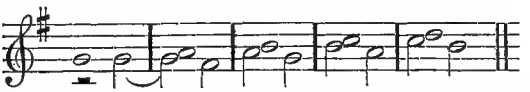
It is easily seen that in all these cases the preparation of the suspension *does* exist, though only in imagination. We cannot say that such formations are inadmissible or wrong; but we must admit that there is something estranging in them. And, finally, we might allow a suspension without any preparation,



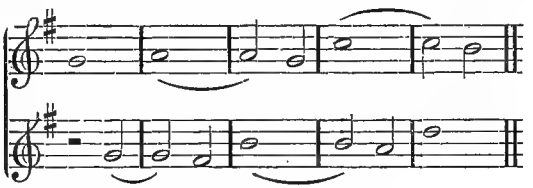
if we aimed at all at a decisive, startling combination of tones. These unprepared suspensions might serve also for a milder, anxious expression; for instance,



But often the apparent irregularity lies only in the manner of writing it. Phrases like the following,

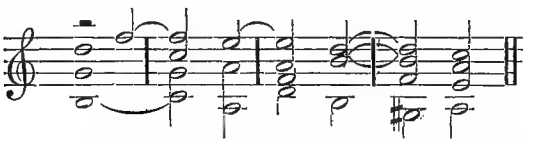


containing apparently unprepared suspensions, might have been written thus:



and can in that manner be easily explained.

But we must return again to the resolution of the suspension. It ought to take place while the chord into which the suspension has found its way is still in existence. Here, however,

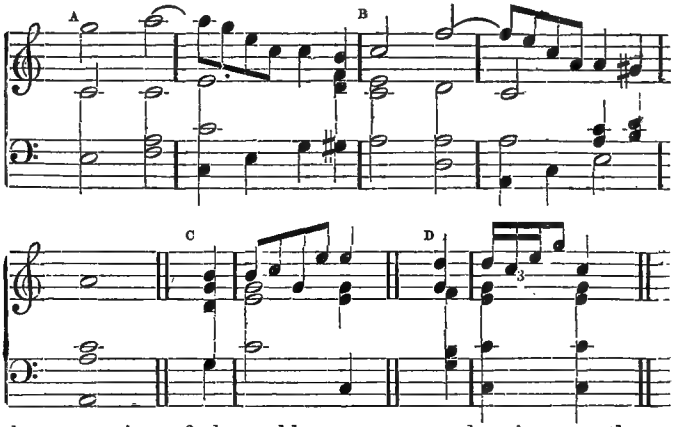


we see the resolution take place on a different chord. The *f* of the treble ought to resolve into the *e* of the chord *c-e-g*, and in like manner should the *e* resolve into the *d* of the chord *g-b-d*. Both tones pursue their prescribed course, but in the meantime the chords *c-e-g* and *g-b-d* have changed into *a-c-e* and *b-d-f*. It is sufficient that the resolution is effected on the proper *tone*. The chord does not influence it.

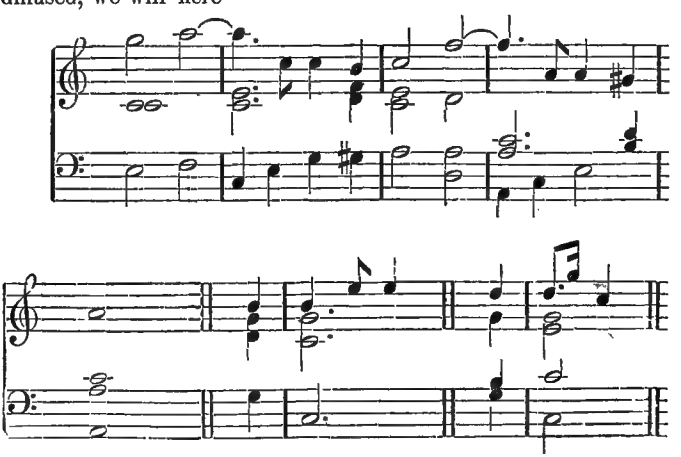
But there are still more peculiar formations.

We know already of two ways in which to retain a chord while one or two voices progress:—1, the suspension, and 2, the progression of a voice from one chord-tone to another, (Nos. 59 and 95.) We need not hesitate to employ the two in succession, as

long as either of them, particularly the suspension, obtains its due. Here, for instance,



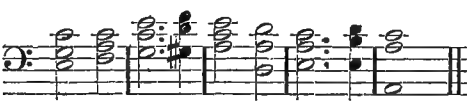
the suspension of the treble at A, B, C, and D, is correctly resolved into the next tone; but immediately after the resolution the voice passes through several tones of the chord. This corresponds perfectly to our rules, but since it might often be too diffused, we will here



at once seize the last tone to which the harmonic tones lead and omit the middle tones. It is true, by this omission, we have also omitted the resolution; instead of the tones *c-e-g*, we must be

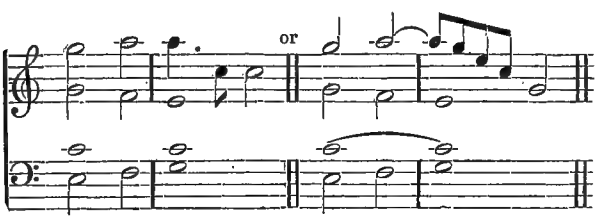
contented with the still sounding chord, which though containing the resolution-tone, has it in another voice. But this very defect serves only to isolate the suspension-tone still more, and to make the discrepancy between it and the harmony either milder or stronger.

In the above it is not only better to introduce the suspended chord-tone simultaneously with the suspension; for instance, to make the accompaniment of the above thus:



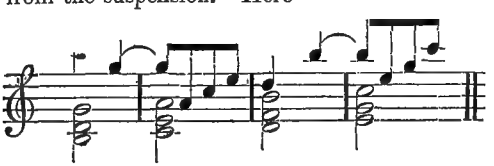
but the chord-tone in another voice can serve in a degree as the expected tone of the resolution.

Here we see again a deviation from the first rules of the suspension. We see the suspension-tone and the suspended tone at one and the same time, though in different voices.



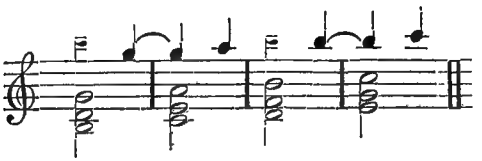
The distance modifies the disagreement, if it does not obviate it.

Finally we must mention an ambiguous form which arises analogically from the suspension. Here



we see this form twice before us. The *g* of the treble remains with the chord *a-c-e;* in the same manner does the *b* remain with the chord *c-e-g*. Were we to consider these tones as suspensions, they could only be from below; *g* would resolve into *a*, and *b* into *c*, though the resolution of *g* would be an octave lower, and

that of *b* retarded by two intermediate tones. But in that case these suspensions

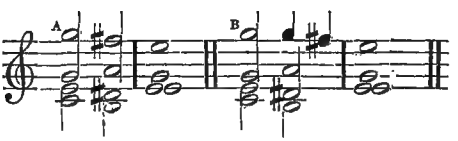


would be nothing but octaves of another voice dragging after it, and suspension-tone and suspended tone would meet in the same moment. A regular explanation of these tones is absolutely impossible. But we need not bestow too much time or thought upon these formations. It is sufficient if we have a perfect control over them.

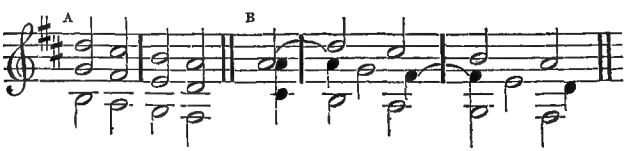
Thus much of the suspensions themselves. But we have seen that in all their forms they have the effect of making the single chord less clear and distinct, because they unite or solder it to another. Therefore, they serve as modifications of such relations as, when given in their nudity, as it were, produce a disagreeable effect. This last remark reminds us of the reputed octave- and quint-successions. Let us glance first at

FIFTHS MITIGATED BY SUSPENSIONS.

Here at A,



we see an evident quint-succession; it belongs to the less objectionable class, on account of the seventh therein contained, and at B it is still less objectionable on account of the suspension. The following succession



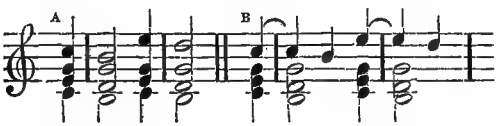
would be absolutely wrong, if written as at A; but the suspen-

sions at B, soften it to such a degree that we need not hesitate to employ it.

It is different with

OCTAVES COVERED BY SUSPENSIONS.

Here, it may often happen, that suspensions make the evil worse. Thus if here,



at A, the octaves are objectionable; those at B, on account of the meeting of suspension-tone and suspended tone are still more so.

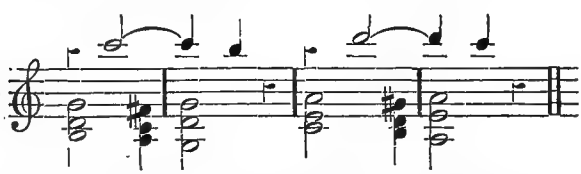
CHAPTER III.

ANTICIPATION (ANTICIPATED TONES).

WHAT made the suspension comprehensible and sufferable? The fact of its having been a part of the preceding chord. In other words, it finds its explanation and justification in another chord, and in one that has already been heard.

To attempt the reverse, let us now lead a tone into a chord to which it does not belong, and with which it disagrees. But the tone has not remained from a former chord, but has been anticipated from a future chord.

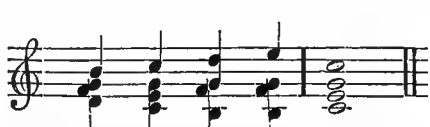
341.



We see here that the tone *c* appears in total contradiction to the chord *g-b-d*, without any justification of its appearance. The tone *d* appears in like manner with the chord *a-c-e*. The succeeding chords, only, *f*♯-*a-c* and *g*♯-*b-d* explain the contradiction. It is clear that such discrepancy, which is not even prepared, must produce a more harsh and decisive effect than the prepared suspension. We have to consider well, therefore, if the introduction of such effects corresponds with the object we have in view.

Sometimes it is the consistency in the progression of our voices, which leads us to anticipating tones, as for instance in the following:

342.

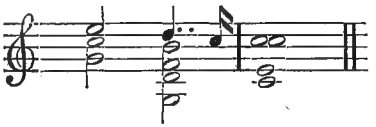


where the upper voice pursues its own course, and thus blunders

upon the tone *e*, which belongs to the succeeding chord, *c-e-g*, instead of the dominant chord which accompanies it.

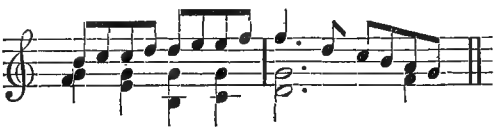
Sometimes the anticipated tone is merely intended to add rhythmical vigor to the succeeding one, and cannot be considered as belonging to the chord in which it appears. Thus, in the ancient cadences,

343.



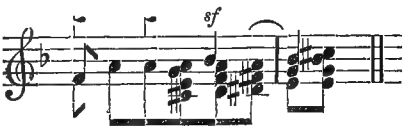
in which the anticipatory *c* acts merely rhythmically. Or, by means of anticipation, the figuration of a melody may become more animated, as in the following:

344.



And again these anticipated tones are used, when one voice makes a decisive entrance. Thus, *Spontini*, in the overture to his opera, *La Vestale*, after having closed in *F* and modulated to *D* minor, anticipates a tone (*b*),

345.



full two chords, and only justifies it in the third chord.

There is no need of searching for such formations, or of discovering all possible liberties we might take with these tones. It is best to trust to our inspiration for their development.

Ninth Part.

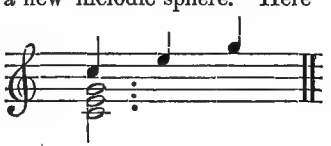
The Pass.

The suspensions and anticipations were the first step towards the liberation from the triple nature of our chords, and the dependency of every tone of the melody upon the harmony beneath it. But in reality this dependency of the melody has not ceased. For if the tone of our melody does not belong to the chord beneath it, it belongs to either the one before it or after it. Yet we have now at least a choice, and this new liberty has arisen from the harmonic element itself, or, to speak strictly,

FROM THE CONNECTION OF THE CHORDS.

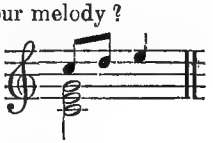
But we know that in every single chord lies the element of melody; that we can introduce its tones in melodic form, one after the other. And this new view of harmonic formations must open to us a new melodic sphere. Here

346.



we see the treble pass through all the tones of the chord. It proceeds, consequently, in thirds. But knowing that the third is in reality nothing but the third degree, and that another degree lies between it and the fundamental tone, can we not include this intermediate degree in our melody?

347.



We go from *c* through *d* to *e*.

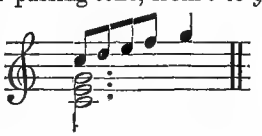
Thus we see at once the nature of the pass. The passing-tone does not belong to the harmony; neither to the present, nor to the preceding, nor to a future one. It is simply a melodic substance, a filling of the melody, a mediation between two tones (*c* and *e*). It agrees with the harmony, because it leads from one harmonic tone to another harmonic tone.

CHAPTER I.

THE DIATONIC PASS.

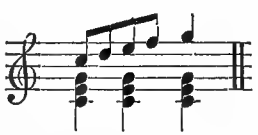
We are already familiar with it. We might have introduced in No. 346 a second passing-tone, from *e* to *g*.

348.



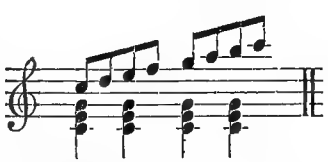
Instead of the prolonged tones of the chord we might have repeated them thus:

349.



We see that the chords fall always upon a harmonic tone of the melody. Thus we are led to place the whole scale upon one and the same chord:

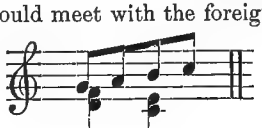
350.



the repetitions of the chord have also been here employed.

This leads us to something entirely new. We see that the last chord does not fall upon a harmonic tone of the melody, but upon a passing tone, *b*. This is not as satisfactory as the former arrangement, though the fourth chord is in reality nothing but a continuation of the same harmony which did not displease us to the tone *d*, *f*, and *a*. Still more strange would this form be, if a new chord should meet with the foreign tone:

351.



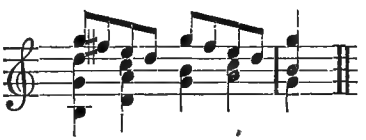
but the immediately following harmonic tone (*c*) balances everything in either case.

A passing tone, when happening upon the entrance of the chord itself, is called

a Participant Tone.

Thus in the following example,

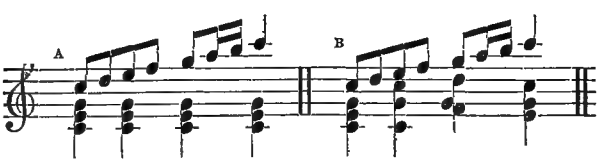
352.



the two *f*♯'s are passing-tones, while the two *e*'s are participant-tones, a distinction, however, which we consider as unessential.

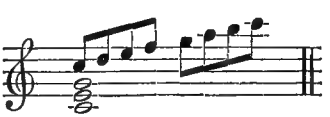
Had we tried to avoid the participant-tones, we might have achieved the same object by a different rhythmization, perhaps like the following:

353.



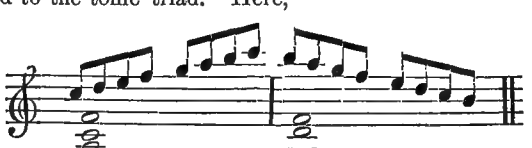
This has led us to employ two passing tones in succession. In reality we have done this already in No. 349. Let us now contrast the repetitions of one and the same chord:

355.



it is nothing essentially different from No. 350, and we see the whole scale accompanied by one single chord, in which we consider *d*, *f*, *a*, and *b* as passing tones. But we are by no means confined to the tonic triad. Here,

356.



is the ascending and descending scale with the accompaniment of

the subdominant and dominant chords, in which we have only taken care to begin and end on a harmonic tone.

Thus far we have taken all our passing-tones from the reigning scale. These are called

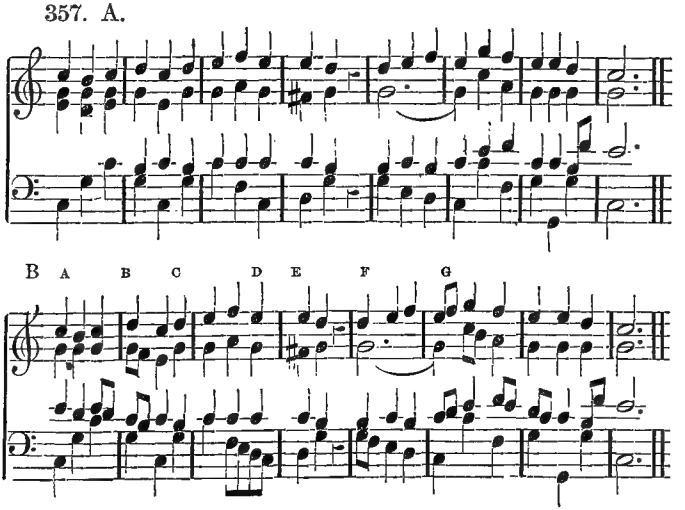
Diatonic Passes,

and well deserve a thorough practice before we proceed.

Above all we must remember that it is immaterial in which voice we introduce the pass. Like the suspensions, they can occur in every voice, and consequently in different voices simultaneously. The above tells us that every third can be filled up with one passing tone, and every fourth with two, or, to speak strictly, with one passing-tone and one participant-tone.

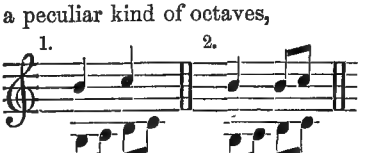
Let us now employ them as often as possible, We take again our melody of No. 255 as basis, harmonize it as A simply, and at B we introduce our passing-tones.

357. A.



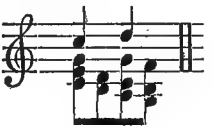
Why, at A, have we not filled out the bass? Because it would have produced a peculiar kind of octaves,

358.



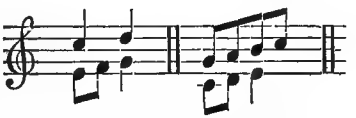
(1) which are even worse than the open octaves at 2. A similar case would have happened at E between bass and alto.

Why, at B, have we not filled out the bass? It would not have been wrong:

359. 

but the seventh-succession between alto and bass, and the accumulation of passing-tones in the three voices, would have given a dragging character to the whole phrase.

Why, at C and G have we not filled out the alto? Because in the first case we should have caused consecutive fifths between treble and alto,

360. 

and in the latter case between alto and tenor.

CHAPTER II.

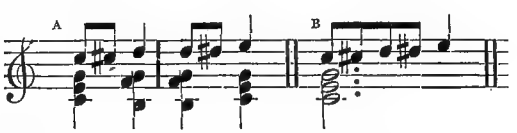
CHROMATIC PASSES AND ASSISTANT-TONES.

A.—*The Chromatic Pass.*

Our present means enable us to fill every third and every larger interval with passing-tones.

But let us attempt to fill out a smaller interval, the second. With the same right that we seized between *c* and *e* the intermediate tone *d*, we can now take the tone *c*♯ between *c* and *d*, or *d*♯ between *d* and *e*.

361.

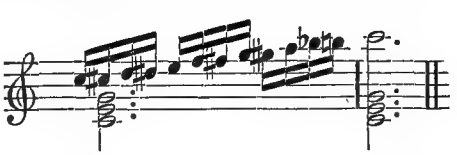


This gives us much to consider.

Firstly, we see passing tones employed, which are foreign to the key.

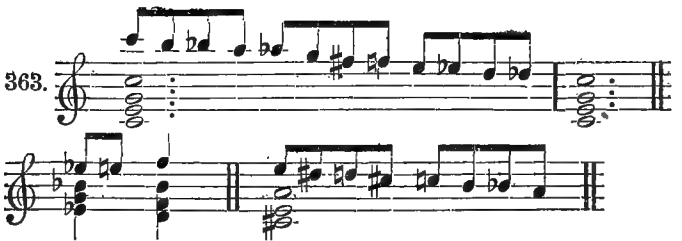
Secondly, we see the small space of a third filled by three passing tones, and thus are led to take the whole chromatic scale upon a single chord.

362.



Thirdly, we see among the passing-tones raised degrees which are in the chord in their original form; for instance, *c*♯ against *c*, *g*♯ against *g*. Of course we can also introduce depressed degrees against natural, or natural degrees against pressed or raised degrees.

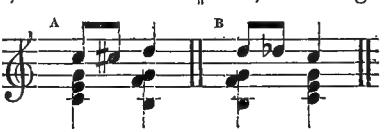
363.



These formations remind us of our former cross-relations. But such a momentary cross-relation, appearing in an analogical succession, can produce no disagreeable effects; it is merely a part of the melody, and by it justified.

This teaches us also the proper manner of writing passing-tones. A passing-tone, for instance the *c*♯ at A, is nothing

364.



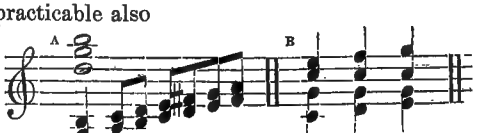
but a leader from one tone (*c*) into the next one (*d*); we might say it raises itself until it reaches the *d*. If, according to this, the passing-tone is nothing but a continuation of the preceding harmonic tone, it should, of course, be called accordingly. Consequently *c* raised to *c*♯, in order to lead to *d*; and in the same manner, at B, *d* descends to *d*♭, in order to lead to *c*.

But why, in No. 362, have we written *b*♭ instead of *a*♯, as it ought to be according to the above rule? or why in No. 363 have we taken *f*♯ instead of *g*♭, or *d*♯ and *c*♯ instead of *e*♭ and *d*♭? Because the strict observance of this rule would lead us to tones too foreign to the original key, and would make the reading of notes more difficult.

What we have just now shown in the upper voice can also be done in every other voice. But we must look out, particularly in the middle voices, whether there is room for these passing tones.

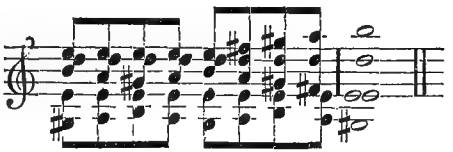
And since these passes are practicable in every voice, they must be practicable also

365.



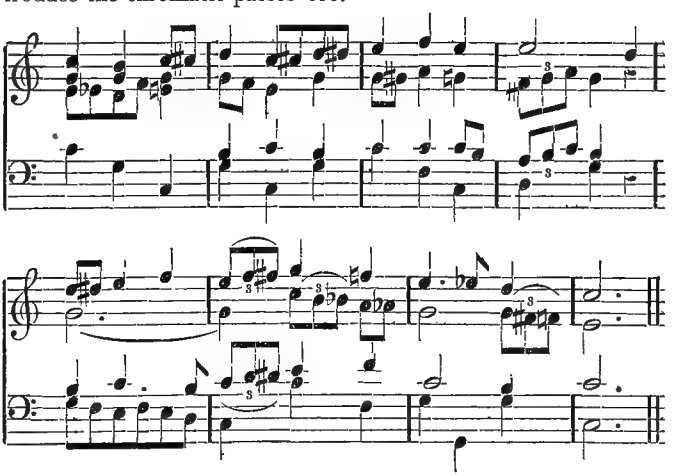
in two voices simultaneously, or even in three or more voices:

366.



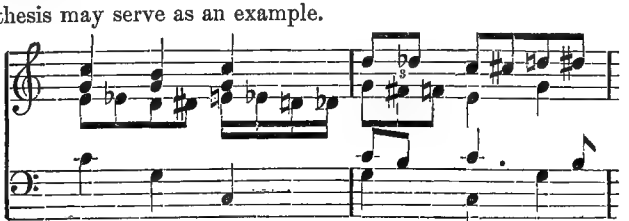
But, of course, the more passing tones we introduce above or below the harmonic tones, the more are the latter placed in the shade, and the more danger is there of causing confusion.

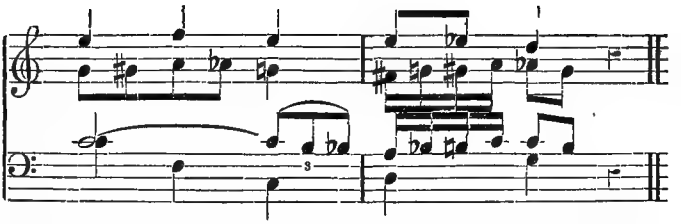
And again we return to our phrase of No. 357, in order to introduce the chromatic passes too.



In order to make this phrase richer, we have introduced some suspensions, but we have by no means exhausted all possible passing-tones. For this would lead us into false progressions, and would overload the phrase with foreign tones. The treatment of the thesis may serve as an example.

368.





With the introduction of the diatonic passes we ran the risk of spoiling an originally correct phrase by consecutive fifths and other bad relations. The chromatic passes add another danger—that of accumulation of foreign tones and cross relations.

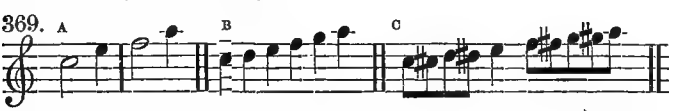
B.—*The Assistant Tone.*

A pass supposes always a vacuum, a step in the melody wide enough to admit of an intermediate tone. Between *c* and *e* we could place the *d;* between *c* and *d* we had room at least for *c*♯; between *c* and *c*♯ there is no vacuum to be filled, consequently we can have no pass.

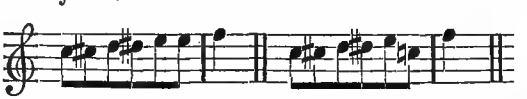
And yet there may be at such places a necessity of interposing a tone; the very effects of the pass would lead us to think of this.

We gain by the pass, as we have just explained, the possibility of filling up larger intervals by interposing smaller ones.

But these passes serve also to increase the rhythmical animation. Here, for instance,

369. 

the half notes of A are resolved into quarter-notes at B, and into eighth-notes at C. But between *e* and *f* we can gain no such animation by the mere passing-tone, because there is not room for one. It is true, we might avail ourselves of tone repetition, or of a harmonic by-tone:

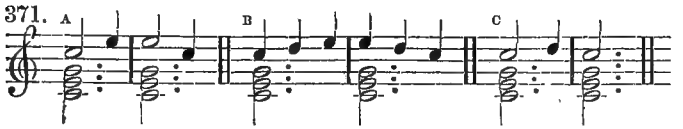
370. 

But for many reasons neither of these expedients might be of any use. The first might seem poor, and the second might be preven-

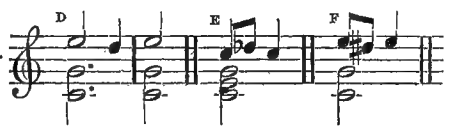
ted by the progression of the bass, which, too, might go from *c* to *f*.

For such cases we require a particular aid. We derive it thus: The phrase A

371.



372.



is filled up by passing-tones at B. The *d* led to *e* and back to *c*. But must we absolutely go to *e*? We can change our mind and return before we get there, as at C and D. At E and F we have made use of half steps. Such tones are called

Assistant-tones.

They can be either steps or half steps, ascending or descending. Half steps are generally best for ascending.

We shall have more use for these assistant-tones at a future time. At present it will be sufficient for the student to practice chromatic passes, with the occasional introduction of assistant-tones.

CHAPTER III.

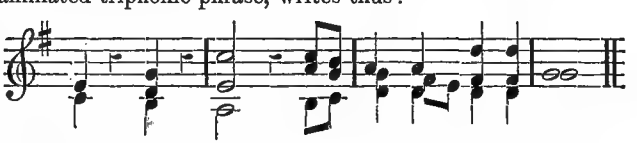
THE RESULTS OF PASSES.

The results of these passes consist principally in the additional means acquired; then in the capability of making our voices more connected and more flowing than we were able since we deserted our monophony. It is true that by a too frequent application of the passes, our melodies can now become *too* round and polished, as they were formerly too angular and rough. But our only object, for the present, is to practice these passes, and at a future time we shall be able to to judge to what degree we can make use of them.

But the greatest advantage obtained is that we are no longer forced to construct a chord for every tone of the melody; and thus we are liberated at once from the yoke of harmony. Our harmony is now dissolved into four voices, each of which developes itself melodically; based upon harmony, but not chained to it.

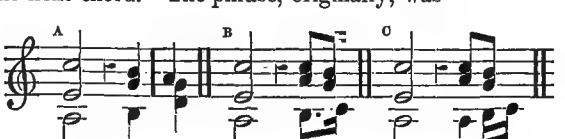
This melodic relation can even sometimes be predominant over the harmonic element. Mozart, in the "Magic Flute," in a light and animated triphonic phrase, writes thus:

373.



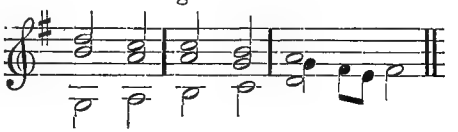
It is easily perceived that the two-eighth-notes of the second measure are in reality nothing but the chord *g-b-d*, suspended in the upper voices by *a-c* and the lower voice *passing* from *b* to the *d* of the next chord. The phrase, originally, was

374.



at A, and according to rule as written at B or C; but Mozart wanted a more flowing progression and he mixed up suspension, and harmonic-tone and passing-tone. A similar proceeding has been applied in the following:

375.



where the simultaneous application of suspension and pass has preserved the flowing progression of all the voices and the dia tonic progression of the bass.

But since the passing-tones now actually begin to play a part in the harmony itself, to which, originally, they did not belong, they are also applied, though merely

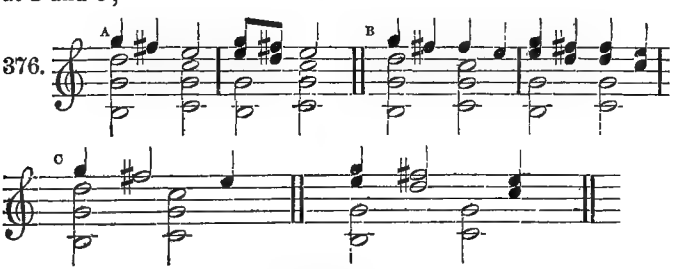
pseudo-harmonic tones,

as real harmonic tones. We use them

1, *as suspension-tones,*

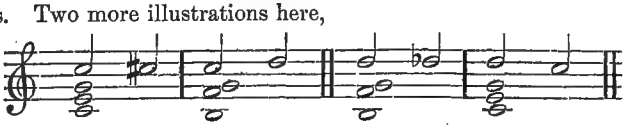
by making of the passing-tones at A, for instance, suspensions as at B and C;

376.



the preparation of which suspensions does not even exist in the chord *c-e-g*. It will not be difficult to construct similar illustrations. Two more illustrations here,

377.



merely to remind us that even cross-related passes can become suspensions. The passes can also become

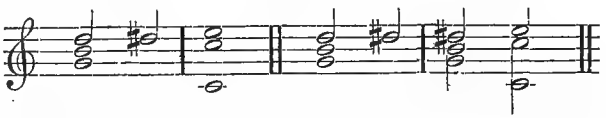
2, *new chords,*

or, they can at least disfigure well-known chords to such a

degree, that we can use them independently, without regard to their origin.

The first of these new chords arises from the pass of the fifth in the major triad.

378.

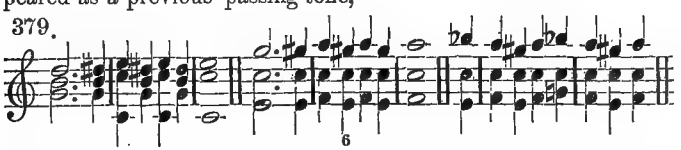


The triad has now a superfluous fifth, and owing to this circumstance this chord is called

THE SUPERFLUOUS TRIAD.

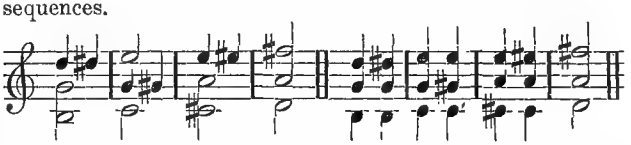
It is the only passing-chord which boasts of a particular name. It can be introduced whenever its superfluous fifth has not appeared as a previous passing-tone,

379.



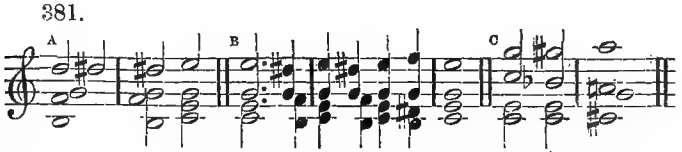
and it can be used in all its inversions, and for the formation of new sequences.

380.



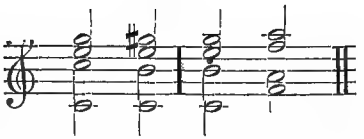
Since the dominant chord is nothing but a major triad with added seventh, we can embody with it, also, this superfluous fifth (A), and use the new chord *g-b-d♯-f* independently (B). It follows, as a matter of course, the rules of the dominant chord, with the exception of its fifth, which, owing to its origin, must ascend.

381.



Knowing, further, that every septime-chord is nothing but a triad with added seventh, we might apply the same proceeding to the major septime chord. Here

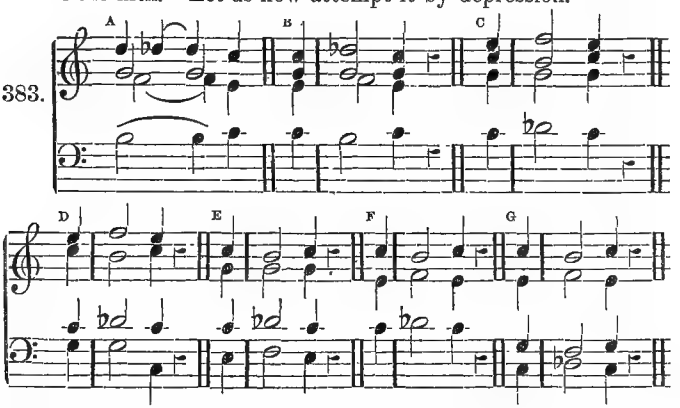
382.



we have made from the chord *c-e-g*, the passing-chord *c-e-g*♯, and by adding to it the seventh, we have obtained the septime-chord, *c-e-g*♯*-b*, which we might call the superfluous septime chord, if it were at all necessary to have a name for every new formation.

Formerly in No. 378, we altered the dominant chord by elevation of the fifth. Let us now attempt it by depression.

383.



We have done it at A; at B we have placed the passing-tone at once on the place of the proper harmonic tone, and thus formed a new chord, *g-b-d*♭*-f*, which differs from the dominant chord by its depressed fifth, and by the absolutely necessary descension of that interval. And as we formerly made a diminished triad from the dominant chord, we can now make a triad from our new septime-chord (F) which is even smaller than the diminished triad, and which might, therefore, be called the double-diminished triad, if we were in want of a new name.* If this new chord is to be

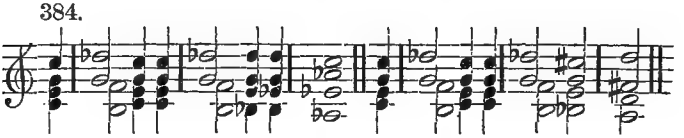
* The chord *d*♭*-g-b-f* (C) boasted formerly of a high-sounding name. Just because the superfluous sixth, *d*♭*-b* attracted principal attention, it was called the chord of the superfluous sixth, or some similar name; and not satisfied with this, the same name was given to another chord, *d*♭*-f-a*♭*-b*, which had altogether a different origin, and thus, sext-chords, terz-quart chords, and quint-sext chords were all thrown into one category. This name is not only superfluous, but it is absolutely unsystematical and confusing.

used tetraphonically, it can only be done by the doubling of the seventh, as at G in the above.

But it can easily be seen that not every position of these chords appears favorably. All those positions in which the conspicuous tone ($d\flat$) is close to the third (b) are unfavorable, because after once exciting our expectation by its strange appearance, it resolves into a tone which has already been obtained otherwise, and thus deceives us.

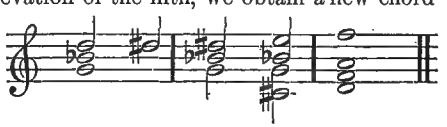
Chords like these, which take their intervals from different keys, can become new means of modulation, or mediation, by transferring to them the freer resolutions of the dominant chord; for instance, thus:

384.



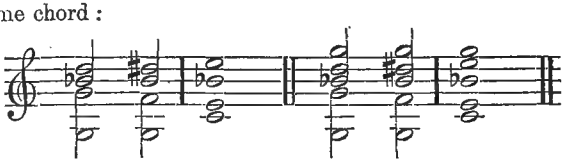
The minor triad, too, has a major fifth, and by transferring to it the elevation of the fifth, we obtain a new chord

385.



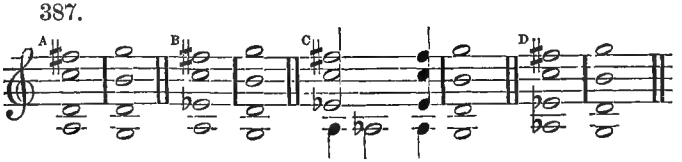
(g-$b\flat$-$d\sharp$) which resembles a well known sext chord (g-$b\flat$-$e\flat$), but which differs from it in its progression, and even leads to a new septime chord:

386.



Finally, we are led to harmonic formations, in which the formerly unlawful quint-succession appears purposely and with good effect.

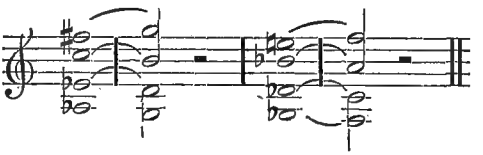
387.



We know that the diminished septime chord (B) arises from

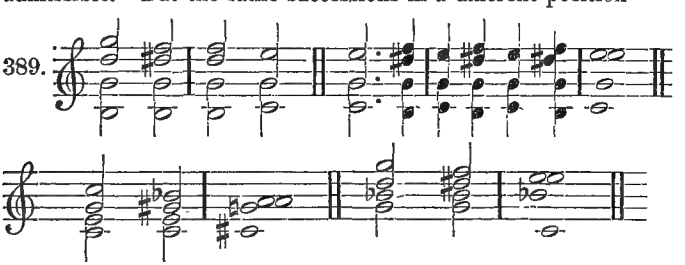
the dominant chord (A). We have also submitted to the succession of heterogeneous fifths. Here now, at C, we have introduced the passing-tone *a♭*, and at D follows the chord, *f♯-a♭-c-e♭*, formed by it. The lower voices form here consecutive fifths, which are by no means disagreeable or inapplicable; nay, which can even be used, as Mozart has done, and with good effect, in slow movement.

388.



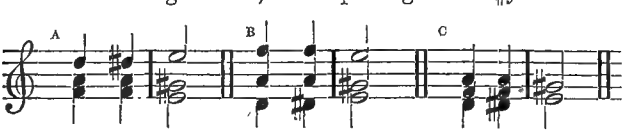
But we are led here to an observation which the attentive student has probably made before us, *viz:* that the peculiar position of the chord-tones does much to favor the admissibility and the comprehensibility of these successions. If the foreign tone is too close upon another tone of the harmony, if the two resolve in one and the same tone, the resolution of the chord brings about something so forced and confused that it can almost become incomprehensible. The successions of No. 383 and 386 are well admissible. But the same successions in a different position

389.



are useless and wrong. Thus, is the passing-chord *d♯-f-a*

389.



quite correct at A and B, while at C it is spoiled by the position. But let us return to No. 388.

Why are we justified *now* in making use of progressions which we formerly denied ourselves? Not merely because we now

consider them agreeable and fit for use, but because we have now been led to them consistently, analogically, instead of owing them to accident.

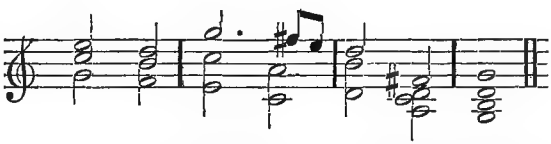
Here is the point whence arises often the greatest error. We say the greatest, because active minds often seize the new and irregular instead of the nearest, and thus cut off at once every further development. But we must warn, also, against slavish obedience to the letter. Every artistic nature has within it the impulse to free itself and to become independent; but reason must decide how far a deviation is admissible.

And, finally, we see in the passing-tones

3, *the means of modulation,*

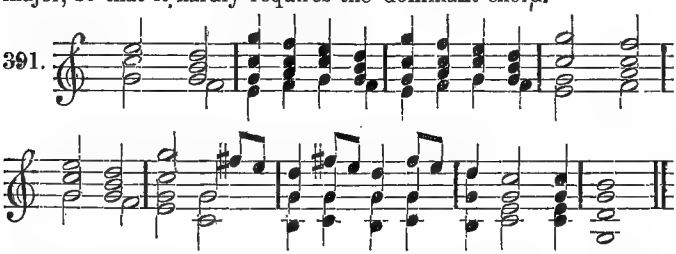
or, at least, the introduction and preparation of transitions. Here

390.



we see a phrase beginning decisively in *C* major, but modulating in the third measure into *G* major. But already in the second measure does the passing-tone *f*♯ indicate the subsequent *G* major, so that it hardly requires the dominant chord.

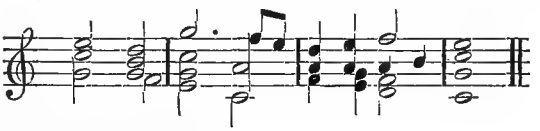
391.



Here we see both dominant and subdominant defend and maintain the *C* major, and yet, from the sixth measure, everybody will imagine himself in *G* major, though the dominant chord of that key does not make its appearance even at the end. The passing-tone *f*♮ would have as surely indicated and retained the key of *C* instead of *G*.

This leads us to a very important observation. If we had taken the passing-tone *f*, we should not have been prepared for

G major but rather confirmed in *C* major. In future, therefore, we will construct the pass before a modulation, so that it prepares rather than contradicts the subsequent key. For this very reason, if we intended to remain in *C*, the tone *f*♯ would have been unfit,

392. 

and the tone *f*♮ the right one.

Tenth Part.

The Treatment of More or Less than Four Voices.

Lately we have limited ourselves to the tetraphonic composi tion, and only occasionally represented one thing or the other with more or less voices. It requires now but a brief considera tion of the more-or-less-voiced composition.

CHAPTER I.

THE TRIPHONIC, DUOPHONIC, AND MONOPHONIC COMPOSITIONS.

We have perceived that not even four voices were sufficient to give us always complete chords, unless by making use of harmonic bye-tones. Complete nonachords were altogether impossible. Septime chords could only be carried out completely with five voices, and faults could only be avoided at the expense of the completeness of the chords.

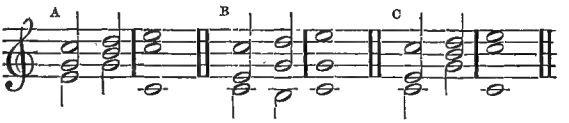
It is natural that this incompleteness of chords should happen still more frequently with less than four voices, or we should still oftener make use of harmonic bye-tones. These, however, if we wish to avoid a certain emptiness and superficiality, will force us to make use of passing-tones; and it may not always suit our purpose to overload our voices with harmonic and non-harmonic additional tones. Before making use of the latter, therefore, we must first consider

What harmonies we can best represent without imperfection.

The triads require but three voices, and consequently can sometimes be better applied triphonically than tetraphonically. But we know already, that the progression of the voices often prevents our directly reaching those tones which seem desirable to

us. Therefore, even in triads, we shall have to resign many a position, in order to represent our chords as completely as possible. If, for instance, we were to accompany the first tones of the scale with triads, the position at A and B would be preferable to that at C,

393.



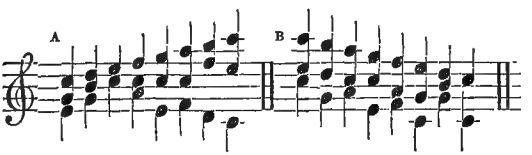
though we had to introduce sext-chords in the former.

But even this precaution will not always be sufficient; we must, for the sake of flowing progression, leave some chords incomplete. It is now necessary to know what tones of a chord can best be omitted. We have given all necessary information on that point.

The dominant-chord cannot be represented completely without harmonic bye-tones. The fifth is the interval in it which can best be omitted. We know, too, that the fundamental tone can be omitted, in which case we have a diminished triad left; the progression of the voices will often force us to make use of this chord.

Let us now attempt the accompaniment of the scale according to our first manner of harmonization, with employment, however, of the inversions, wherever they seem preferable.

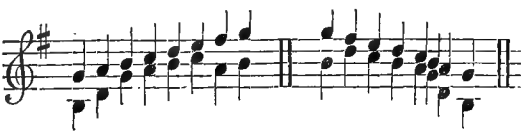
394.



We perceive that the final chord of B has lost the fifth and third, unless we prefer to end with a sext-chord.

The duophonic accompaniment would be still more meagre. We could employ the natural harmony,

395.

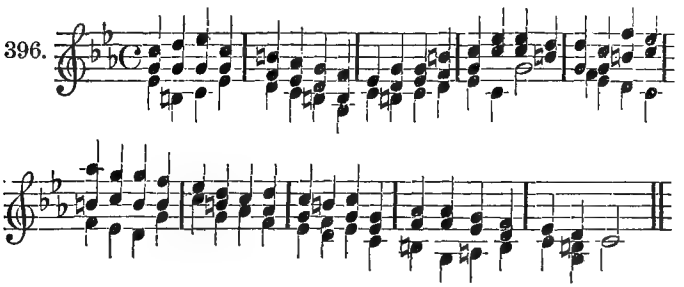


or, take a mere succession of sixths, or pursue any other course.

The nonachords would have to resign third and fifth, unless we preferred to exchange them for derived septime-chords, in which latter case the third had best be omitted.

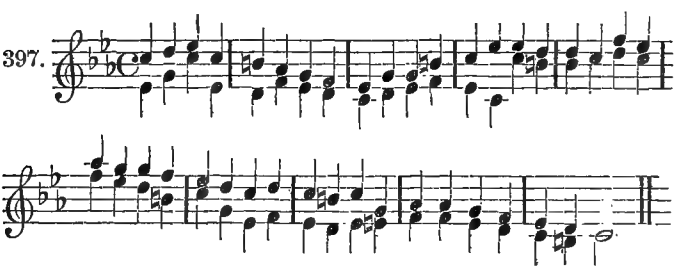
According to these principles, No. 217 would be harmonized triphonically, perhaps thus:

396.



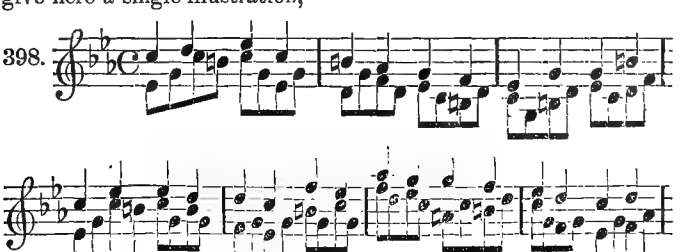
In duophonic composition we should have to cling still closer to the model of natural harmony, and to successions of thirds and sixths, for instance:

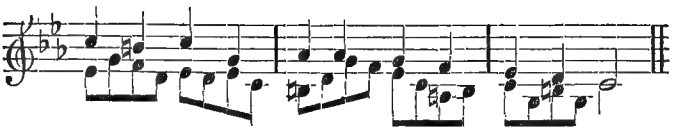
397.



We know, too, that by means of added bye-tones and passing-tones the harmony can be completed, and the voices made more flowing or animated. Instead of all further explanation we merely give here a single illustration,

398.





which the student may analyze for himself. This, of course, is not the only way in which the phrase can be carried out.

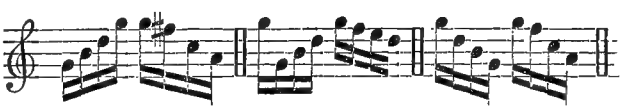
And, finally, we must return again to the monophonic composition. This was our first lesson, but we resume it, having in our possession the means of a fully-developed harmony, and the tone-formations attached thereto.

We must now confess that the mere scale, though the first and most necessary, is but a meagre basis for melody. Our phrases have long broken through the limits of a single scale; the thesis will no longer end upon the tonic, but strives towards the dominant, or has become a separate part and ends in the key of the dominant, or the parallel, &c.; we have a continual longing for harmony and the latter strives again for embellishment by suspensions, passing-tones, &c.

Can all this be done in a single voice? Beyond doubt.

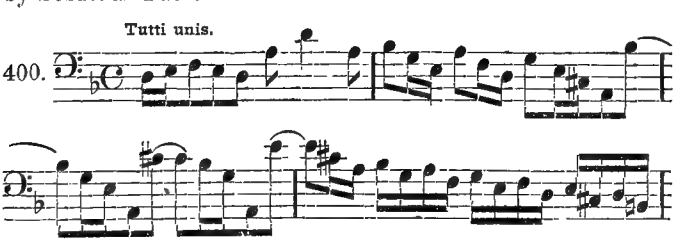
We know already that chords can be melodically represented, in part or entirely, by a single voice. Then we can easily see that suspensions, passing-tones, &c.

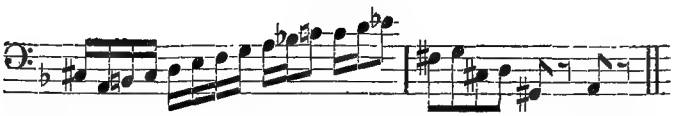
399.



can easily be mixed with the harmonic tones. We have, therefore in reality, the means for every harmonic form, and consequently can distinctly express every turn of the modulation. Thus we see in the following monophonical ritornel of a concerto by Sebastian Bach:

400.





that it contains all essential points of an energetic modulation; the tonic chord at the beginning; the turning to the dominant (measure 2 to 5); the modulation into the subdominant (measure 5 to 6), and the modulation to the dominant.

It will be sufficient for us to indicate the means and possibility, as the student of harmony will have no difficulty in writing such illustrations.

CHAPTER II.

THE MORE-THAN-TETRAPHONIC COMPOSITION.

We must here distinguish whether all the voices belong to one single body, one choir, or to two or more bodies, which, though connected, still form separate choirs among themselves.

The first is in preference called many-voiced, or polyphonic.

A.—*The Polyphonic Composition.*

In it the necessity of leaving harmonies incomplete will occur less frequently, but instead of it we shall often be forced to double one or more tones, in consequence of which we must be careful to arrange our voices so that they are not in each other's way.

Above all, we must think of those harmonies and those resources which permit each voice to pursue its free and independent course. Nevertheless it will not always be possible to lead all the voices clear through the throng. We shall have to choose occasionally between a greater and less evil, and we shall even be forced to employ duplications and progressions which are contrary to rule; the greater number of voices forces them upon us and covers them.

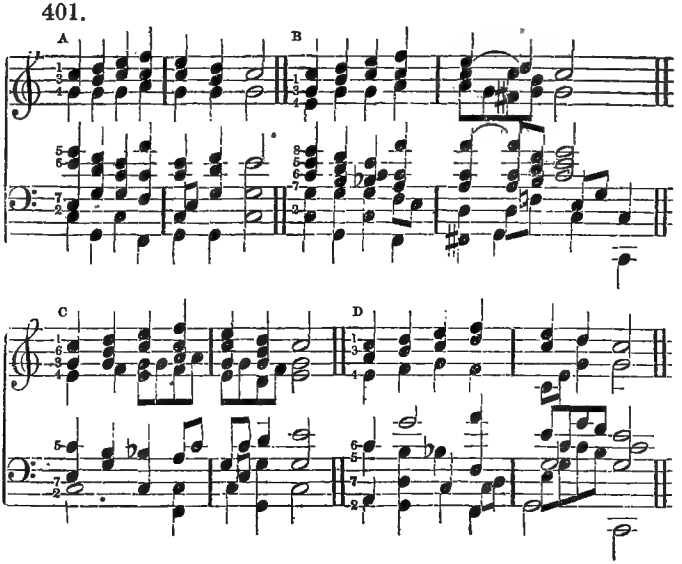
Next to this, we must think of procuring more space for the middle-voices. The bass must go lower, must take the fundamental tones more frequently, in order to give a firm basis to the numerous voices. The middle voices, in turn, must cling to one position as long as possible, and only progress in small steps; for, when a numerous mass of voices once happens upon dispersed harmony, it is very difficult to control it and to avoid confusion. Finally, we must always remember in the right place, to extend every chord internally, (*i. e.* to make of the triad a septime chord, and of the latter a nonachord) in order to find the greatest quantity of matter for the many voices.

All these rules are so clear and consistent, and have been prepared so much already, that they require no particular practice,

save a few attempts to apply our acquired information even under difficulties. We add the subsequent remarks, but warn expressly against a too-great extent of these attempts, as this manner of writing is of but little importance, save in extraordinary cases, and leads the student to ponderousness and affectation. The polyphony in the orchestral composition is something based upon entirely different principles.

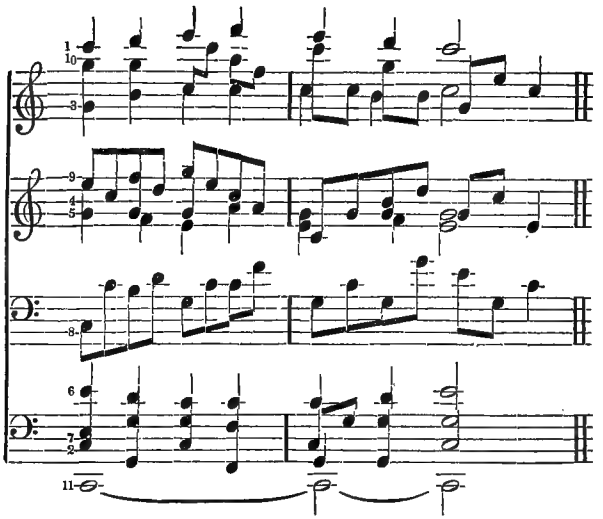
The student ought to begin with very simple successions, and test of how many voices they admit. Here

401.



at A, we have written a simple melody with an accompaniment of six voices. At B we have arranged it octaphonically, and have introduced a somewhat richer modulation. At C and D are two more treatments of the same for seven voices. We have everywhere taken as many voices as we could introduce without difficulty. It is practicable enough to add still more voices. Thus, we have here

402.



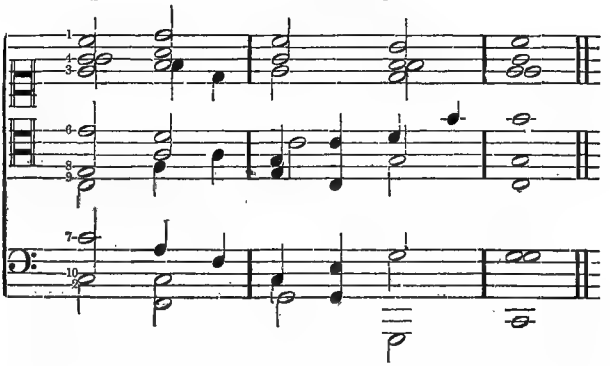
arranged the melody of No. 401 for ten voices, or eleven, if we count the pedal-tone. But, independent of single inconveniences, it is undeniable that the ninth and tenth voices find their way only with difficulty, and even then have to cross between tones which have been much better represented by other voices.

In order to obtain the greatest amount of clearness and care in polyphonic compositions, it is always best to have two or three voices progress in thirds and sixths, and to place these parallel voices so close together, that they form among themselves an independent, separate choir. In A, B, and D of No. 401, the voices 1, 3, and 4, formed such a choir; in C is a similar choir consisting of the voices 1, 6, and 3. There is another in A, formed by the voices 5 and 6; and the voices 8, 5, and 6 have another in B. Wherever such choirs occur they ought to be placed as soon as possible after the upper and bass voices.

In No. 401, after having written the bass, we have immediately written the voices 3 and 4, which, together with the upper voice, form sext-chords and appear as a well-closed mass. After this it was desirable to have a second mass, proceeding in a contrary direction, which formed itself in the voices 5, 6, and 7, though much less connected. The other voices were added as well as we could. As a matter of course, we cannot always finish one

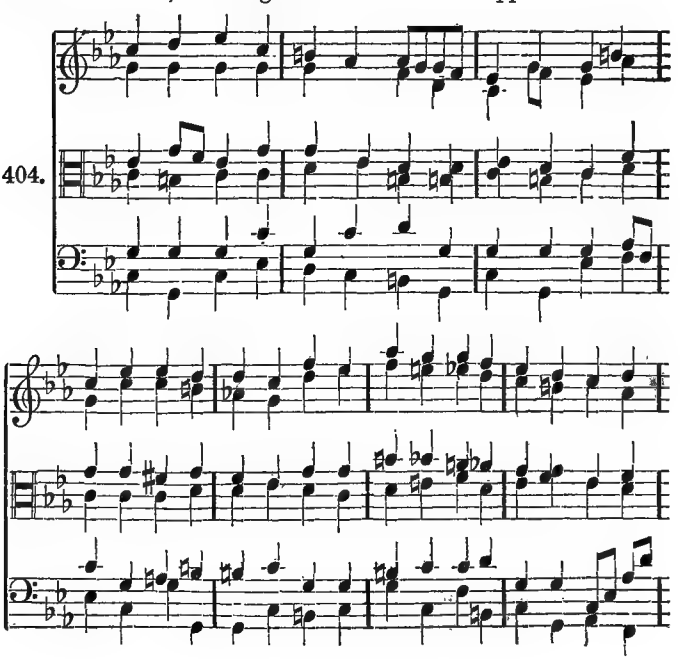
or two voices before beginning the others. It can only be done where a voice seems particularly apt to such treatment, as, for instance, the voice 8 in No. 401, or, when the general arrangement of the voices permits it, as in the following:

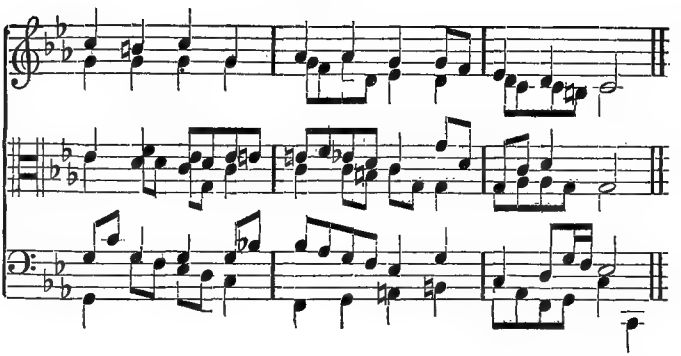
403.



In conclusion, we will now give a hexaphonic (six-voiced) treatment of No. 396, with slight alterations of the upper voice.

404.





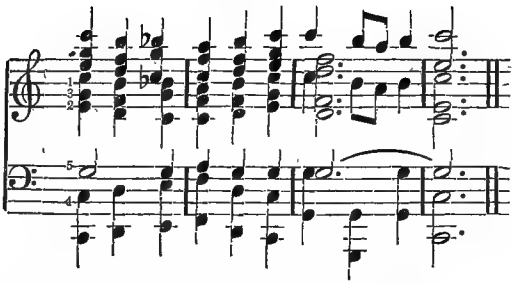
It cannot be denied that the whole appears overloaded, and though at some places we have obtained a greater volume of tone, the phrase, as a whole, is by no means an improvement on the former treatment. But this is much less owing to the manner of execution, than to the forcedness of the task. It was not our object to make a work of art, but simply to illustrate the possibility and the manner of writing polyphonically. But even admitting that the phrase had been treated with an artistic object, the result would teach us—

that even in the number of voices simplicity and sufficiency are always best, and that every excess is injurious.

Not easily will a composer overload his work with voices, without a particular and sufficient reason. But even under the existence of a reason, he will not treat everything polyphonically, but only appropriate phrases, or parts of phrases, particularly in simple, slowly-developed harmony and quiet, steady melody, while the remainder will have to be satisfied with a less number of voices. Handel, in his oratorio "Israel in Egypt," has treated several choruses in this manner; sometimes employing eight different voices, sometimes forming different choirs, and at other times dissolving two or more voices in one.

There is an apparent or pseudo-polyphony which is effected by doubling some *real* independent voices, bass or treble, or perhaps all voices. We have had such cases in the double-duophonic composition, (page 90) and have decided that these duplications cannot be considered as actual voices. For this reason we can consider the following phrase

405.



merely as pentaphonic, though it contains nine voices. Even if these assistant-voices should exchange their parts among themselves, the phrase would still be pentaphonic. Not even the embellishment of one or the other of these assistant-voices, by means of bye-tones or passing-tones would change it into a *real* voice; and if we were to write the highest voice of the above, thus,

406.

for instance, it would still be a mere duplication of another voice, (page 72).

B.—*The Double-choired, or Polychoired Composition.*

This is the more customary manner, because it is more practical and useful.

Dividing the voices contained therein into two or more masses, we can employ one or several of these masses by themselves, or, we can unite them in real polyphony. The first manner, particularly, which is not limited to periods or phrases, but which can be employed in even the closest interchange of choirs, gives to the whole manner a mobility, transparency and clearness, of which the real polyphonic manner is absolutely incapable.

There are various ways in which this manner can be employed.

We can form two or more choirs of voices.

The choirs can have equal or unequal number of voices and position.

The different connected choirs can be employed differently; one choir can be treated simply, another can be more figurated, &c.

All this demands no new law, and requires but a simple consideration, which then, of course, refers to the real polyphonic composition, also.

The united choirs must appear as a *whole;* not merely all together, but each choir separately, and at every separation of the single choirs, the fact of each one being a whole, even when they are all combined into one grand whole, causes us to conceive each one separately, as long as we can distinguish it from the others.

From this it follows that we must treat each choir as an independent whole, characterize it by good upper and lower voices, and make the harmony as complete and clear as possible, while we are at liberty to permit between two voices of different choirs all those relations and progressions which the real polyphony forces upon us.

But as soon as we consider every choir as a separate whole, the most manifold applications are open to us. While we give the harmony to one choir, the other can proceed in unison, octaves, or take the pedal-tones, or contribute in various ways to the effect of the whole.

All these formations will be reconsidered in the orchestral and vocal composition. They do not, for the present, require even a particular practice. It is sufficient to have indicated them.

SECOND BOOK.

THE ACCOMPANIMENT OF GIVEN MELODIES.

INTRODUCTION.

In the first book we have acquired the means which the tonical and rhythmical elements offer us for artistic objects. We shall now proceed to the *application* of these means for artistic objects.

Though we have already constructed compositions with the mere natural harmony, which in their sphere were probably satisfactory, we were always restricted in our means, and these compositions were merely the means of practice. Our future labors are also merely devoted to the practice and development of our means, but they can already be considered as independent works of art.

Beginning again with the most simple task, we are led at once to

THE ACCOMPANIMENT OF GIVEN MELODIES.

There are two species of melodies, the accompaniment of which can be demanded of the composer:

1, the choral melodies, and

2, the secular melodies of the people.

Other melodies are generally provided with an accompaniment by their composer.*

* [The chorals and national melodies, or melodies of the people, form a style of music peculiar to Germany and to German composers, and, owing to their importance, German theorists have attached to them all those rules of composition which perhaps could have been attached to other musical forms. The translator had no alternative before him, but either to give the information embodied in these important branches as he found it, and to give a literal translation of the work before him, or to reduce this information to mere principles and to adapt them to other cosmopolitan forms. The translator of this work has chosen the former, because, independent of the correct conveyance of the author's ideas, he thought it too good an opportunity of acquainting the student with these peculiar musical forms, to let it pass for mere brevity's sake, or for other equally unimportant reasons.]—Ed.

First Part.

The Accompaniment of the Choral.

The choral melodies, as embodied at present into our mode of worship, furnish us, because of their simplicity, the first and easiest task for the practice of accompaniment. Their compass, generally, is not too extended, their melodic progression is generally quiet and steady, and their measural construction is very simple, for with the exception of a few passing-tones, their melody progresses generally in measural parts,* interrupted but rarely by notes of longer duration. The division into single, short strophes (phrases), each of which, as it were, forms a whole, facilitates their internal arrangements, the treatment, and the survey of them.

Even the adaptation of words to them is very simple; each syllable has, generally, one tone, to which, occasionally, a passing-tone is attached. Thus, in every respect, the choral forms one of the simplest lessons for accompaniment.

But in other respects it can also be called one of the richest. For the noble simplicity of its melody makes it appropriate for the most manifold harmonization and accompaniments; aye, most of the chords have so general a destination, that from various points of view they admit of various accompaniments, which each in its place and for its object can be considered the best, while none can be called the only correct one.

Added to this is now the religious and artistic importance of the lesson. The choral was always, and is now an essential part of Christian, particularly evangelical worship, and will remain so for all time. Many of these melodies have been transmitted to us from our fathers and forefathers; for centuries past they have been the voice of the people, their consolation and their strength:

* Measural parts are such parts of a measure as are indicated by the rhythmical signature of a piece; thus, for instance, in $\frac{2}{2}$ time, all the half notes, in $\frac{4}{4}$ time all the quarter-notes, &c.

they have been the armor of the church at the time of the Reformation, and with all these reminiscences, with all this power, they will pass on to posterity, perhaps for centuries to come.

Even now, and ever after they are mixed up with our life,

as PEOPLE'S SONG, led by the organ,

as ORGAN-PIECE, of deep significance, and

as CHORUS, in simple majesty.

Thus all our ideas connected with the choral are elevating. But besides this the treatment of the choral is an important part of the official duties of every organist, a highly productive matter for sacred music, and even for secular music, a highly important form.

Points of View for the Treatment of the Choral.

We have already said that one and the same choral can admit of many different treatments, each of which from its respective point of view can be correct. But there are three points in particular, from which we have to consider our lesson and to decide upon the treatment of the choral.

FIRSTLY, it may be our object merely to accompany the choral melody in the simplest manner. In this case we should choose such harmonies as are most easily attached to, and best support the melody.

SECONDLY, it will soon be perceived, that every good choral melody expresses a more or less decided character, and therefore has a *typical* significance. To make the exposition of this typical character the aim of harmonic treatment, is an artistically higher task.

THIRDLY, we can make it our object, not merely to have our treatment correspond with the general character of the choral and the words, but to take into consideration, also, the character of each single verse.

Thus much as an explanation of our lesson. From every point of view, in material respect, we can accomplish our object in various manners. We can make it

1, more or less voiced; we shall generally prefer tetraphony;

2, more or less rich in harmony;

3, more or less melodically developed

CHAPTER I.

GENERAL CONCEPTION OF THE MELODY.

A.—*Confirmation of the Key and the Principal Points of Modulation.*

As soon as we have selected a choral melody for treatment we have, above all, to decide upon the key in which it is written. We know, already, that the signature and close are the first characteristics of a key; we also know what are the nearest modulations of each key. These marks, in most cases, will be sufficient to guide us safely. But we have to encounter a peculiar difficulty in the chorals. Many of them originate from former centuries, (or are, at least, conceived in the style of those centuries,) and belong neither to our major nor to our minor keys, but to keys entirely different from either, and which we shall call ecclesiastical keys.

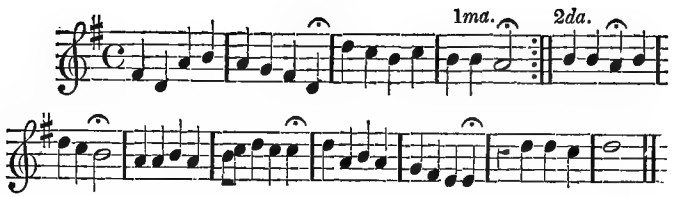
All our former principles are by no means immediately applicable to these ecclesiastical keys. We meet with chorals which have no signature, and which according to our former ideas would be either in *C* major or in *A* minor, and end accordingly. But they end upon *G*, begin, perhaps, with *G*, and yet do not belong to *G* major, because, instead of *f*♯, *f*♮ predominates throughout; and instead of closing with the dominant chord (*d*-*f*♯-*a*-*c*), they close with the triad of the subdominant.

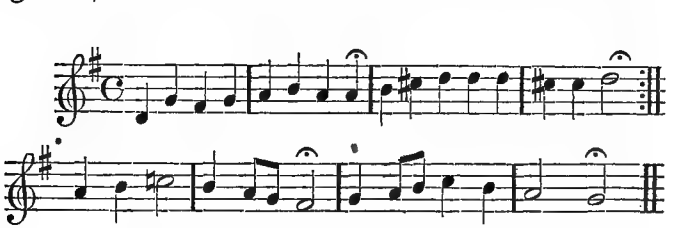
Other chorals, again, seem to belong to *D* minor, but they have not the signature of that key, and instead of *b*♭ we find *b*♮ throughout, to say nothing of other deviations. Finally, we meet with chorals, which, though having the signature and close of our modern keys, still demand a different treatment, if we would produce a characteristic effect.

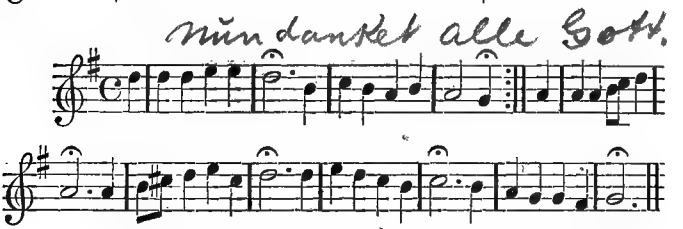
It is clear, that under such circumstances our present information will not suffice for a proper conception of these chorals.

They demand a better information on the character of the keys in which they have been composed, and it is exactly this information which will form the contents of the second part of this book.

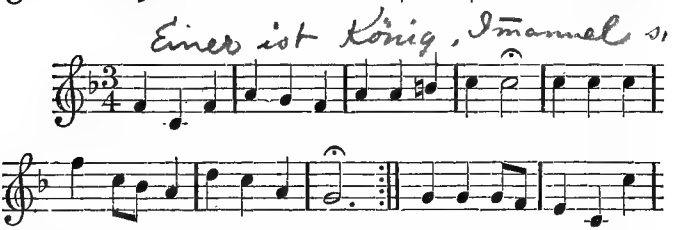
But it is also clear, that before having obtained the above information, we shall not always be able to decide whether a choral belongs to one of our modern keys, or has the mere appearance of it, and is in reality written in one of the ecclesiastical keys. We have, therefore, annexed a few melodies, which can be treated as belonging to modern keys, and which will serve at least for practice.



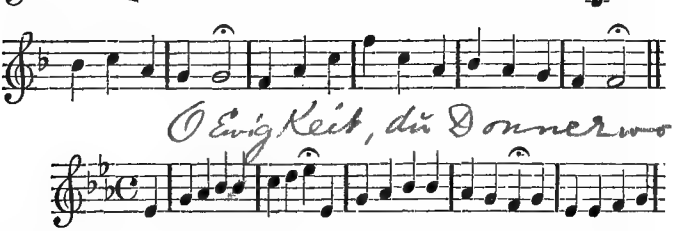


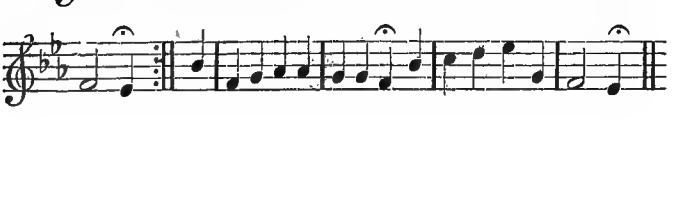


Nun danket alle Gott.

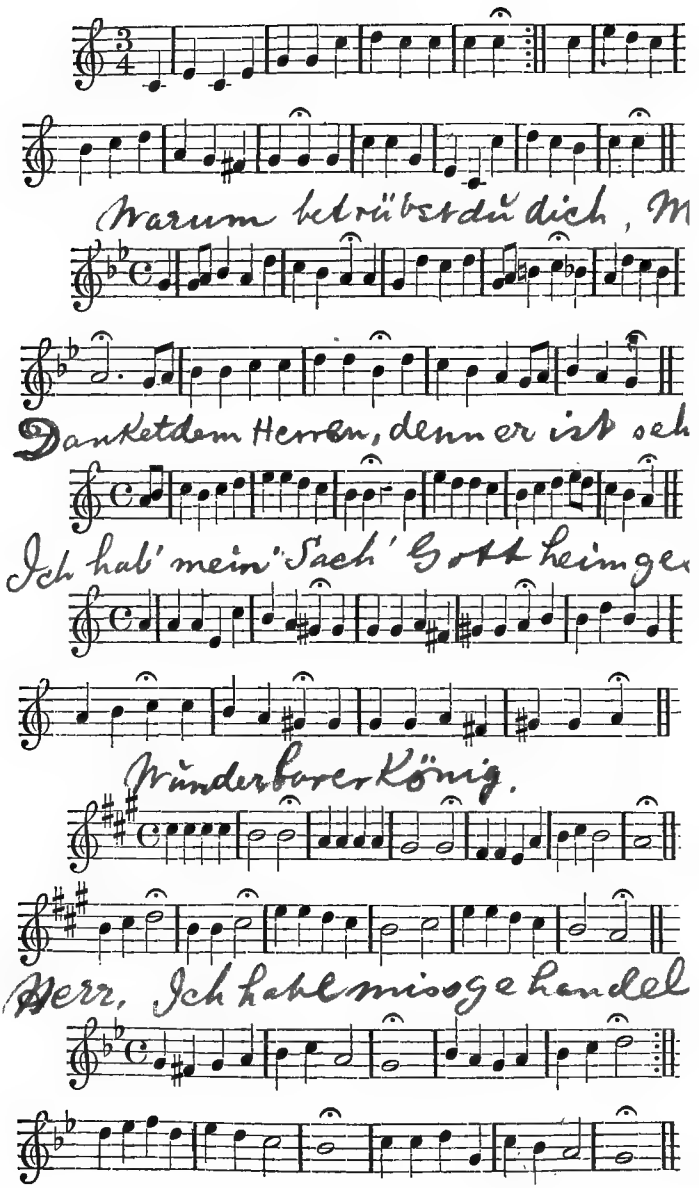


Einer ist König, Immanuel s,



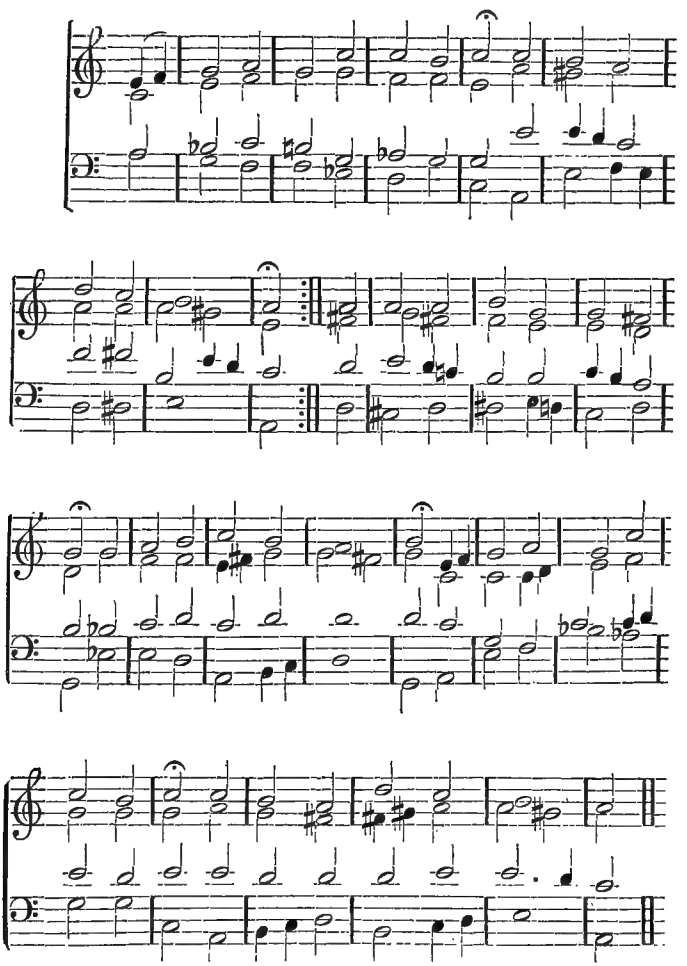


O Ewig Keit, du Donner wo


Warum betrübst du dich, M
Danket dem Herren, denn er ist sch
Ich hab' mein' Sach' Gott heimge
Wunderbarer König.
Herr, Ich habe missgehandel

Having once decided upon the key of a melody, the next question is how to arrange the general modulation. The rhythmical construction of the chorals, must be our first guide.

Many chorals are actually divided into two parts; as, for instance, the first four of the above. In others again, this division is not distinctly marked, but it is indicated by the arrangement of the whole. This is the case here:



The second part repeats the first two strophes of the beginning, and thus causes another beginning, while it indicates at once a division of the choral into twice three strophes.

If a choral has this two-part form, we close, if the melody permits it, the major melodies in the dominant, the minor melodies in the parallel.

Each single strophe of a choral has again its close, which by means of pause or interlude, or voluntary retardation, separates that strophe from the remainder. Thus we have to treat each strophe as a separate part of the whole, and to close it with either a half cadence, or a full cadence; we consider, therefore, the end of each strophe as a resting-point of the modulation upon which the latter breaks off, more or less satisfactorily.

We must reflect well, therefore, at the end of each strophe:—what conclusion of the modulation is possible; and which is the nearest and most natural, and most appropriate for the progression of the whole; and, finally, which conclusion would be most in keeping with the character of the choral, and consequently the most preferable.

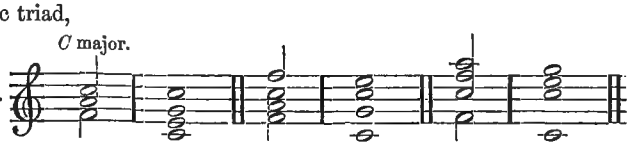
B.—*Summary of Cadences.*

The importance which these strophe-cadences, as chief moments and end-points of the modulation, have for us, demands a careful preparation; the more so, since the numerous strophes of a choral demand so many different cadences.

What cadences have we now at our command?

1. The full cadence, from the dominant chord to the tonic triad. Instead of the dominant chord we might also use the major or minor nonachord, or the derived septime chords, (these, however, form but imperfect cadences); even the dominant triad is admissible, except in the last strophe.

2. We shall require occasionally another species of full cadence, which passes from the triad of the subdominant to the tonic triad,

407. 

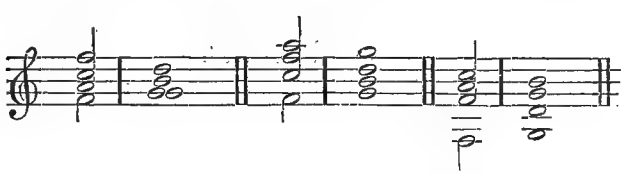
and is called "ecclesiastical cadence." It is evident that this

cadence closes not as satisfactorily as the proper full cadence; the two chords do not even designate the key with decision, (the forms of No. 407, could also be half-cadences in *F* major), and the triad of the subdominant does not so well prepare the final chord, because it has not the impulse of the dominant chord to resolve into it. Yet, in choral treatment we cannot well do without it, and we need not care how much or how little satisfactory it is.

Full cadence and ecclesiastical cadence, can at all events be employed for single strophes, in an imperfect form; merely the end of the whole, and of the first part (if there is any) demand a perfect full cadence.

3. The half-cadence. This, as we know, is formed by the progression of the tonic triad into the triad of the dominant.

But we cannot always employ it in this form, in the chorals. or replace it by another cadence. The after-effect of the ecclesiastical keys, or the will of the composer, necessitate occasionally a second species of half-cadence, which is formed of the triads of subdominant and dominant:

408. 

consequently of two chords which are not even harmonically connected. However, imperfect such cadence may be, it must be employed occasionally; we have employed it already in No. 105, when the periodical construction was of minor importance, and we have employed it on different occasions to close the thesis. All we have to remember is, that the final chord of the half-cadence, whether in major or minor, must be a *major* triad, because both tone-species have upon their dominants a major triad.

And now we have to enquire at every choral, which of the enumerated cadences are possibly applicable in it?

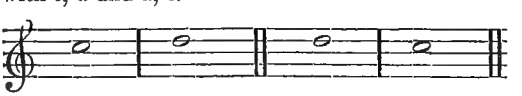
Most of the choral strophes end by ascending or descending one degree of either a step or half-step. In *C* major, for instance, it would go from *c* to *d*, or from *d* to *c*; from *c* to *b*, or from *b* to *c*.

The last tone of the final strophe, at all events, must be part of a major or minor triad; and we know that the last chord of the half-cadence must be major. Let us now survey all possible cases, considering the last tone either as fundamental tone, minor or major third (in the half-cadences exclusively as major third) or fifth.

409.

		Maj. Min.		Maj. Min.
F. C.*	c = 1 =	g c = C C	b = 1 =	. . . . .
	" min. 3 =	e a = A	min. 3	. . . . .
	" maj. 3	. . . . .	maj. 3	. d g . . G .
	" 5	. . . . .	5	. . b e . . . . E
E. C.	c = 1 =	. . . . .	b = 1 =	. . . . .
	" min. 3	. . . . .	min. 3	. . . . .
	" maj. 3	. . . . .	maj. 3	. c g . . G .
	" 5	. . . . .	5	. . a e . . . . E
H. C.	c = 1	. . . . .	b = 1 =	a b . . . . E
	" maj. 3	. . . . .	maj. 3	. c g . . C C
	" 5	. . . . .	5	. . a e . . . . A

In the same manner can we derive here all the possible cadences with *c*, *d* and *d*, *c*.

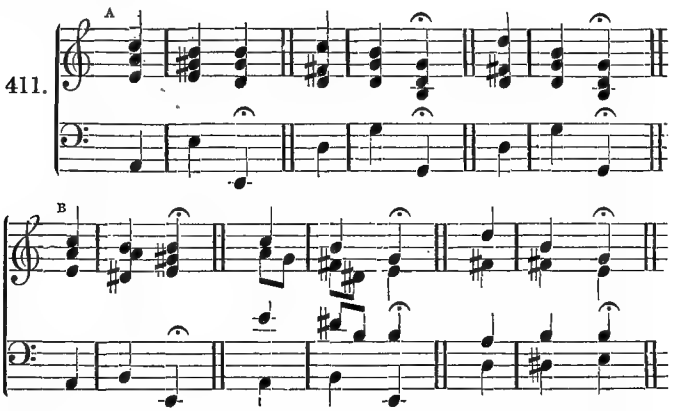
410. 

		Maj. Min.		Maj. Min
F. C.	d = 1	. . . . .	c = 1 =	g c = . C C
	" min. 3	. . . . .	min. 3	. . e a . . . . A
	" maj. 3 =	f b = B♭	maj. 3	. . . . .
	" 5	. . . . .	5	. . c f . . . F
E. C.	d = 1 =	. . . . .	c = 1 =	. . . . .
	" min. 3	. . . . .	min. 3 =	d a . . . . . A
	" maj. 3	. . . . .	maj. 3	. . . . .
	" 5	. c g . G G	5	. . b♭ f . . . F
H. C.	d = 1 =	c d . G G	c = 1 =	b♭ c . . . F
	" maj. 3	. a♭ b♭ E♭	min. 3	. . . . .
	" 5	. c g . C C	5	. b♭ f . . . B♭
	"	. f g . C C		

* F. C. indicates here "full cadence;" E. C. "ecclesiastical cadence;" H. C. "half cadence;" min. 3, "minor third;" maj. 3, "major third;" 1

There are other closings of strophes which exhibit a repetition of the last tone, or the descension of the third; in such case it depends upon the student, and upon the adjudging of each particular case, whether to treat the last two tones as belonging to the final chord and to place the preparative chord upon the previous tone, as here

411.

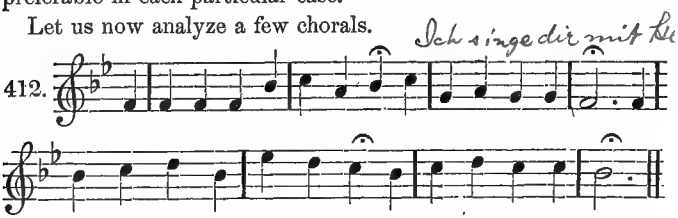


at A, or to attach the whole cadence to the last two tones, as at B.

And now only, we ask which of all the possible cadences is preferable in each particular case.

Let us now analyze a few chorals.

412.



Signature and end-tone indicate here the key of $B\flat$ major; the

stands for "fundamental tone;" 5 stands for "Fifth." The formula is thus: If we take *c* as fundamental tone, we can make a full cadence with *g-b-d-f* to *c* in *C* major or *C* minor. Instead of the indicated nonachords, we can also take derived septime chords, and instead of fundamental chords we can take inversions.

As a matter of course we need not absolutely use the triad *c-e-g* or *c-e♭-g* to go to *d*, but we can also substitute the sext chord *e-g-c* or *e♭-g-c*. Whether all these cadences, as enumerated here, are appropriate or not, is a question to be decided in future.

close can be accomplished with the dominant chord, in regular manner. We might also close in *G* minor, without having the signature interfere with it; but in that case the final cadence would be imperfect, and in the melody we should always meet with *f*, instead of the *f*♯ of *G* minor.

The above choral contains four strophes, two of which resemble each other in length as well as in tone-succession. Now, since the second strophe admits of a close in the dominant, we can consider the two first strophes as the first part of the choral.

The first strophe admits of a like close in the principal key. It might also end in the parallel (*G* minor), and it would matter but little that the cadence would be imperfect. But, according to our principles of modulation, this digression into the parallel comes too soon.

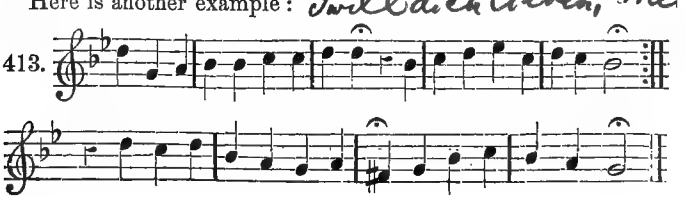
The second strophe closes, as a first part, in the dominant. The nonachord *f-a-c-e*♭*-g* would enable us to close it, too, as the principal key; but, apart from the opportunity to end the second part satisfactorily, a repetition of the close in the principal key would have been lame, and would have confused the harmony, which evidently inclines towards *F* major.

The third strophe, too, might be ended with a full cadence in *F*, by means of the nonachord *e-g-b*♭*-d*, but here, too, it would be a mere repetition of one and the same cadence. We might close in *C* minor, or even *A*♭ major, but for so small a phrase this is far too distant.

But have we not already considered the first strophes as a whole, as a first part which ends on the dominant? Consequently we can consider the last two strophes as a second part which returns from the dominant key into the principal. The beginning of the third strophe corresponds to such conception. We perceive now that the third strophe, as thesis, makes a half cadence from the tonic upon the dominant; the full cadence at the end will be more satisfactory.

Here is another example: I will dich lieben, me

413.

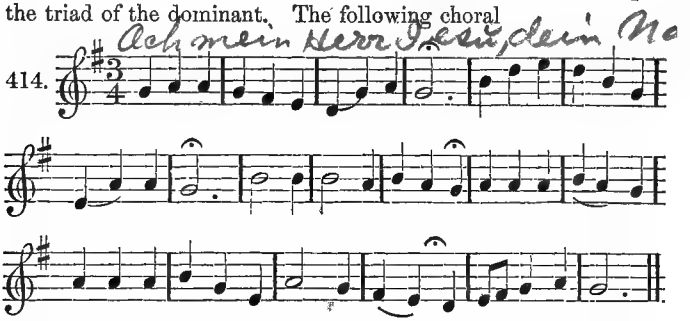


This choral is really constructed in two parts. The key of the whole is evidently *G* minor; the nearest modulation, therefore, would be the parallel, *B*♭ major; and such modulation corresponds to the ending of the first part. We have now decided the two most important points of the modulation, to which everything else must be subordinate.

The first strophe, too, might be led into *B*♭ major, but this would be anticipating and injuring the effect of the just-mentioned full cadence of the whole part; and we prefer, therefore, to employ the half-cadence from the subdominant to the dominant.

The third strophe can make a full cadence in *D* major, by means of an actual modulation, or can make a half-cadence upon the triad of the dominant. The following choral

414.



may serve as third and last example. This melody offers some slight difficulty, because five of its strophes turn towards a close in the tonic, and always in the same manner, by *a*, *g*. In order to retain always the most simple, we should have to remain continually in *G* major; even the penultimate strophe is appropriate for a half-cadence in *G*, though inclined to modulate into *D* major.

But it is clear that simplicity would here lead to monotony. Let us admit at once, then, that the penultimate strophe leads to *D* major; and the question is, how shall we make the other five cadences? The *a*, *g* can be employed for a close

in *G* major, by means of the dominant chord *d-f*♯*-a-c*;

in *C* major, by means of the nonachord *g-b-d-f-a*;

in *E* minor, by means of the dominant chord *b-d*♯*-f*♯*-a*;

and consequently gives us, in addition to the principal key and the dominant, the keys of the subdominant and the parallel. We are now prepared for all the nearest modulations.

We close the first strophe in the principal key, to confirm the latter. The last strophe belongs already to this key.

We place the cadence of the subdominant, according to its character, as near as possible to the end;—consequently in the fourth strophe.

The second and third strophes, consequently, belong to the parallel.

It is easily seen that more than one deviating arrangement could have been made; we might have ended the second strophe, for instance, in *E* minor, the third in *C* major, and the fourth again in *E* minor; or we might have closed the third in *G* major. But where in that case would have been the steady mass in *E*, which we gained in the above? And where would have been the decisive juxtaposition of subdominant and dominant? But in return we should have fallen again upon former keys—

E minor, *C* major, *E* minor, *G* major, *E* minor, *G* major,

we should have modulated in a vague manner, and deadened the effect of former keys by returning to them.

For two strophes we might have chosen, also, the key of the subdominant, *E* major, instead of *E* minor. But in that case the decline of the modulation in the subdominant would have been too conspicuous; and with five major strophes, we should have had but one minor strophe, while in the above sketch there reigns a better symmetry, *i. e.* two minor strophes against four major strophes; or two strophes for the principal key, two for the major, and two for the minor modulations.

Thus much of the sketch of choral music. But when we reconsider the principles which have led us, we see that our actual aim was merely a general appropriateness, a natural, fresh, and analogically-developed modulation, without regard to the single moments of the melody, to the meaning of the words, and to the color which we would like to give to one or the other phrase.

We must remember, therefore, that the above sketches or plans of modulation are subject to many alterations, however appropriate they may have appeared from our present point of view. We must permit such alterations, nay, consider them as necessary, when the melodic contents of a strophe would not agree with the harmonies of the pre-destined key.

CHAPTER II.

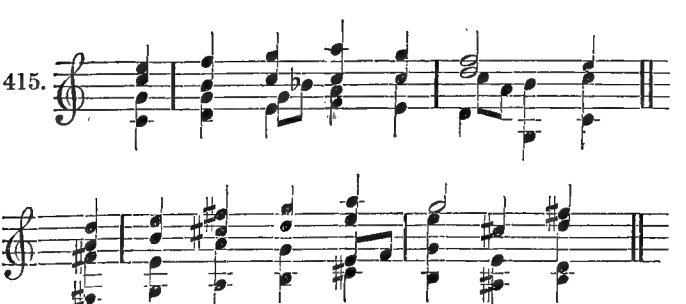
DISPOSITION OF THE HARMONY.

As soon as the strophe-cadences are decided upon, the harmony of each strophe has received its destination; and, according to that destination, it has now to be arranged decisively and steadily, with due regard of all the principles heretofore mentioned. Again, therefore, we think first of the nearest and most appropriate chords, look then to succession and connection, and without losing sight of our aim, we avoid every unnecessary repetition and every wavering. We bear variety in mind, too; particularly when the melody might lead us to monotony, and we shall generally prefer vigorous and dignified modulations, corresponding to religious dignity and elevation, to those of an effeminate, trivial character.

We shall also avoid too frequent inversions, particularly quart-sext chords. The latter, which formerly seemed so appropriate for the preparation of the ending, would here make the harmony monotonous and weak, in consequence of our having so many endings and such short strophes.

For the same reason we shall generally avoid those harmonic successions in which bass and treble progress in thirds or sixths, for instance:

415.



For, owing to the preponderance of the outer voices, such succes-

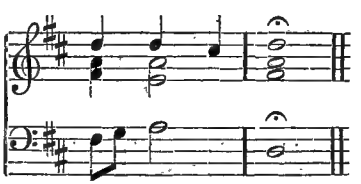
sions are apt to produce monotony and effeminacy in the harmony, however vigorously the latter may be organized in itself. We need not here repeat that, in the proper place, we may deviate from this rule as well as from every general rule.

The whole disposition of the choral melody tells us already that each tone of the melody ought to have its own chord, in other words ought to be a harmonic tone. But we must add to this the following:

1. To give each tone of the melody its own chord is the most simple, it is true, but often, as in No. 417, a chord can be retained for several tones of the melody.

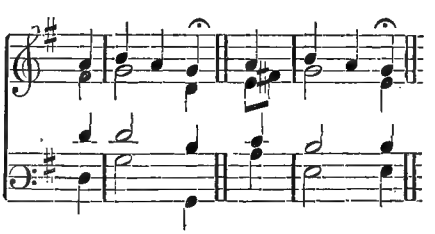
2. A tone of the melody can also be considered as suspension, and consequently as a part of the preceding chord. Thus, for instance, the last strophe of the choral, No. 1, page 287, might be treated in this manner:

416.



3. The tone of the melody can be considered as mere passing-tone. For instance, the ending of the third strophe in No. 414, might be treated thus:

417.

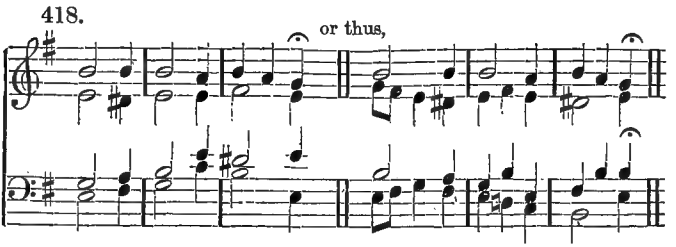


Neither of the above are, however, as vigorous as the employment of a separate chord for each tone of the melody.

4. We meet occasionally, as in the third and fifth strophes of No. 414, instead of equi-long measural parts, notes of longer duration for one syllable. It depends then upon us to give such a tone one single chord, or to give a separate chord to each mea-

sural part therein contained; for instance, the third strophe of No. 414, which might be treated thus:

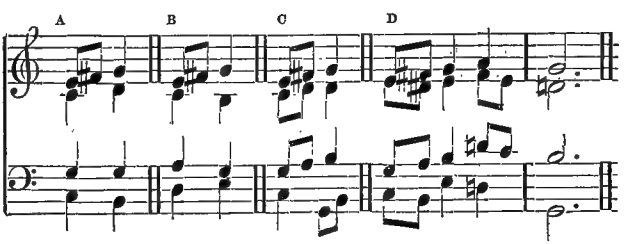
418.



When a syllable has two measural parts, but different, tied notes (for instance in the penultimate measure of the first and second strophe in No. 414,) these two tones can have a single chord. But it is more customary and vigorous, to give a separate chord to each tone.

5. We find occasionally (for instance in the penultimate measure of the same choral) a measural part divided into two measural members—two-eighth-notes instead of a quarter note. We can, in such a case, treat the one or the other tone as passing-tone, or we can give a separate harmony to each of them. The just-mentioned instance might be treated, therefore, thus:

419.



Each of these conceptions can be right in its place, though the treatment as at A or B is more common; but the question is—which of the tones shall be the passing-tone, and which the harmonic tone? If the progression of the melody does not indicate the one as essential, the other as added, we follow the progression of our harmony and consider that one as harmonic, which, according to the connection of the modulation, is most appropriate for it.

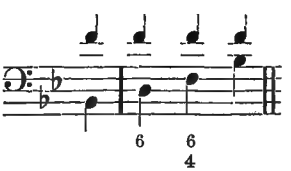
It is less usual to treat each measural member as harmonic,

because it is apt to interrupt the steady progression of the harmony and to overload the modulation. Therefore, if we are once determined to employ two chords, we ought to prefer the closest connection of chords, as at C, though the treatment at D may be appropriate for a particular expression.

After these observations, let us now turn to the task itself, *i. e.* to our first choral, No. 412.

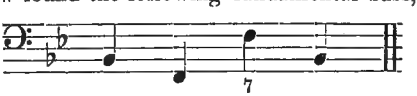
Its first strophe we have decided to end in the principal key. We know, therefore, that the last two tones must be accompanied with the dominant and the tonic chord; it is also most natural to begin with the tonic chord, and to the first *f* of the melody we shall take, therefore, the chord *b*♭-*d*-*f*. And now we have to find the harmony between these fixed points.

Three times more does the *f* appear in the melody, and we shall find the mere repetition of the same chord too monotonous:

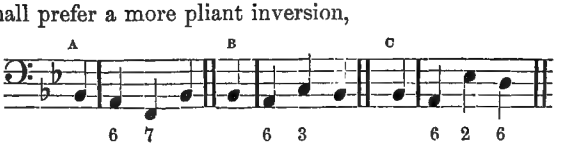
420. 

or its inversions too trivial for the chorals. We must then introduce new chords.

The nearest, and, therefore, best, is the triad of the dominant. The nearest step, now, is the changing of the dominant triad into the dominant chord, which, then, leads back to the tonic triad. We have now found the following fundamental bass,

421. 

but shall prefer a more pliant inversion,

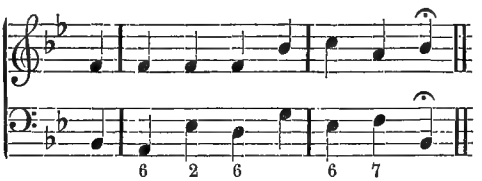
422. 

probably the one at C, because those at A and B end with the same tone with which they began.

There remain now only the tones *b*♭ and *c*; the former might

be accompanied with the tonic triad, if we had not just had that chord, or with the subdominant *eb-g-bb*, if it were not too soon for that chord. We prefer, therefore, the triad of *g*, which reminds us at the same time of the parallel. And exactly because of this reminiscence, we attach the subsequent chord to this harmony and accompany the following tone of the melody with the triad of *c*, the subdominant of *g*. Thus, the first strophe would have this form:

423.

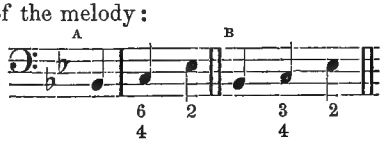


We see here, in addition to other observations, that the bass ascends and descends in a decisive direction; the elevation or ascension is accomplished by quart-steps, therefore uniform, and this would be an additional reason for choosing no other chord for the tone *bb*. The subsequent sext-chord gently prepares the descent of the bass; a triad would cause here a stiff progression in that voice.

If in this harmonic disposition we have specially regarded the bass, we have a good reason for it, in its being an outer voice, consequently more conspicuous and more important.

We can now understand why the beginning could not have been made with a quart-sext chord, or a terz-quart chord on the second tone of the melody:

424.



How weak and inappropriate would the succession at A have been! and how insignificant at B the two inversions of one and the same chord! But the greatest loss would have been in the sacrificing of the consistent progression of the bass, as we obtained it.

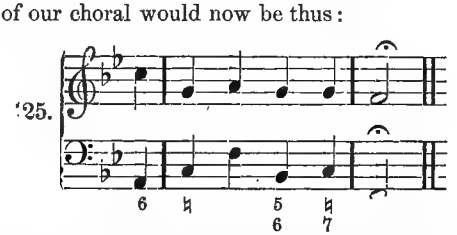
The next strophe we intend to end in *F*; it is, therefore, natural to turn towards it as soon as possible, in order to introduce the new key with decision. Its first tone, *c*, yields under any

circumstances no nearer harmony than the triad of the dominant, which we employ as sext-chord, so as to avoid the repetition of the tone *f* in the bass. But we consider this dominant triad as if it were a tonic harmony, and follow it up with the dominant triad of the new key, *c-e-g*. It is clear that this *triad* is quite sufficient for the transition, and it enables us, besides, to preserve the freshness of the dominant *chord* for the cadence of the strophe. It is natural that the dominant triad, like the dominant chord itself, should lead to the tonic triad, *f-a-c*.

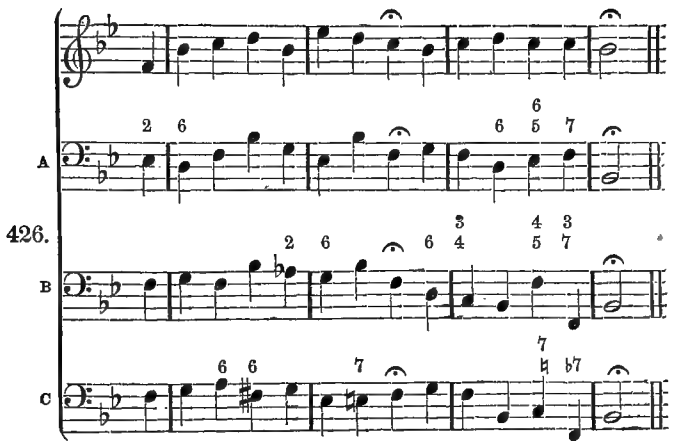
One more tone, *g*, demands its harmony, for the other *g* belongs to the dominant chord. What can this *g* be in any chord ?

The triad of the new dominant is again the nearest; but we have but just employed it, and the subsequent dominant chord would appear weak and a mere repetition. The triad of *e*♭, which we might choose, lays even beyond *B*♭ major, while we are proceeding towards *F*. But we have the minor triad of *g*, or to strengthen the modulation to *F* still more, the major triad or septime chord of *g*.

But is it worth while, for so short a strophe is intended to be in *F* major, to go as far out of the way ? In the absence of particular reasons we shall avoid the modulation to *C*; it lies now nearest to change the foreign chord *g-b-d-f* into an indigenous one, *g-b*♭*-d-f*, as we have learned already, (page 190.) The second strophe of our choral would now be thus:



Here are the last strophes with three different basses,



which will require some few remarks; that there are still other harmonizations possible need not here be added.

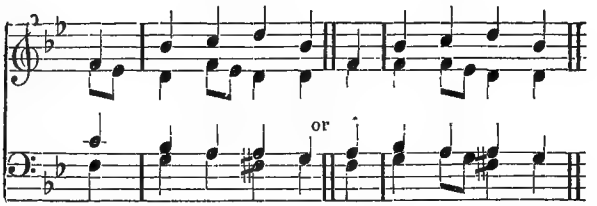
At A, the secunda chord *eb-f-a-c* issues immediately from the preceding final chord, *f-a-c*, and in accordance with the nature of inversions gives a greater mobilty to the harmony. Simultaneously it has been the means of our returning most rapidly and most decisively into the principal key. The subsequent harmonies which seem as if conceived for horns, or a more frequent and untimely employment of them, might easily disagree with the religious dignity of the choral, and we must consider how far otherwise, the treatment of it upholds this dignity, and how far the words admit of a more light conception.

At B, the return to the principal key, in the first part of the strophe, has remained undecided, contrary to the general rule given on page 301. But it is here now the more decided, because we modulate into the subdominant, *E*♭ major, and thus ascend to the principal tone. It is only in the penultimate measure, when this principal key becomes decided.

At C, the bass tried to avoid the return to its first tone, (*f, g, f*); therefore the sext-chord. It would have been nearest, now, to take the triad of *b*♭, but in that case the bass would have proceeded in thirds with the upper voice, three or four times in succession. We introduced, therefore, an actual modulation into the parallel of the principal key. This has caused a cross-rela-

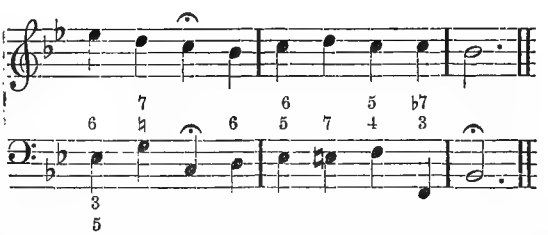
tion in the harmony, which, however, by means of a passing-tone,

427.



could be easily mitigated. We might have avoided it altogether by an alteration of the bass (*f-f*♯, instead of *a f*♯), but we should have lost by it the symmetrical progression of the bass. We might, also, change this obnoxious *f*♯ into *f*, or, in other words, change the major sext-chord into minor; this would give a more serious turn to the whole strophe, and would be better concluded in the manner of A, than that of C. Prompted by the foreign triad, we might also turn to *C* minor, and conclude the choral thus:

428.



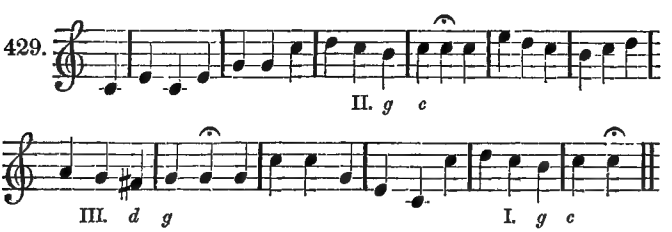
if this foreign and serious ending corresponded to the words or to any particular intention. In that case we should have made a modulation into the parallel of the subdominant, and at a point when foreign modulations, according to rule (page 211), are not in their place. This makes it advisable, in the penultimate measure, to touch once more upon the key of the dominant, and thus to return gently and quietly into the principal key to end there.

CHAPTER III.

SIMPLE TREATMENT OF THE CHORAL.

THE reflections in the previous chapter were merely preparatory. We will now harmonize one or two chorals, and at the same time indicate that method which has proved itself the best and safest.

The following choral, which we select for this purpose, is one of the most insignificant and unchurchlike melodies, but this is of slight moment to us, as long as it gives us an opportunity to illustrate the method of our labor.

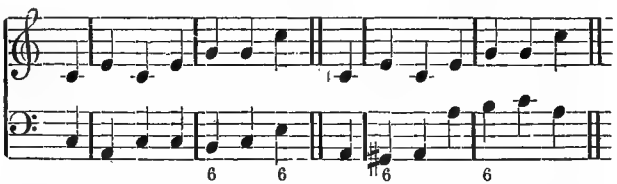


Signature and end tone of the melody indicate the key of *C* major; we decide, therefore, first of all, upon the close of the whole, as at I. The first strophe, too, demands a close in the principal key, as it would be injudicious to end already the first strophe in minor; and, accordingly, we write this close at II., as a second fixed point. Finally, as third point, at III., we write the close of the second strophe in *G*. We have thus three-end points for the modulation, and instead of one single task, we have now three smaller ones. By this proceeding we have first fixed the most certain and necessary, then the most important, and afterwards the more distant steps.

And now comes the arranging of the harmony. Here we can see the weakness of the melody; the beginning of the first and third strophe wanders about in the tonic triad, by no means with that intrinsic strength and dignity which sacred melody obtains from a rich harmonic development.

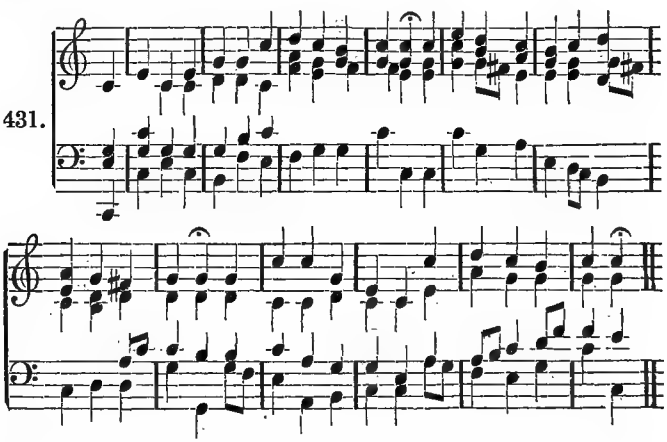
We are not responsible, however, for the melody. But we must hasten to its assistance, as far, at least, as it will permit us. Yet, we shall find that the distinctly-expressed character of the melody makes it very difficult for us. If, in the above, for instance, we should try to avoid the *C* major triad, which is so forcibly indicated by the melody,

430.



we should disfigure, or mask the key in the very beginning; and the further harmonies would be placed in the shade, because we have first introduced the distant chords and afterwards turned to the immediate proximity. This treatment

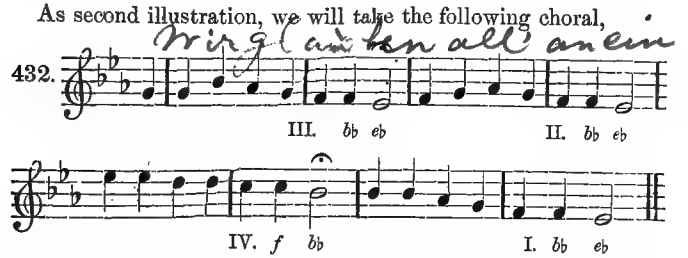
431.



is, therefore, preferable. We have here submitted to the harmony, as indicated by the melody, at least for the first four steps, and have confirmed the principal key in the first strophe with such harmonies as the melody admitted of. The second strophe, too, clings to the principal key, but with its minor triads reminds us of the two parallels, and, finally, confirms the dominant. The third strophe turns again towards the tonic of the principal key, but leaves us ample room for other harmonies. The arrange-

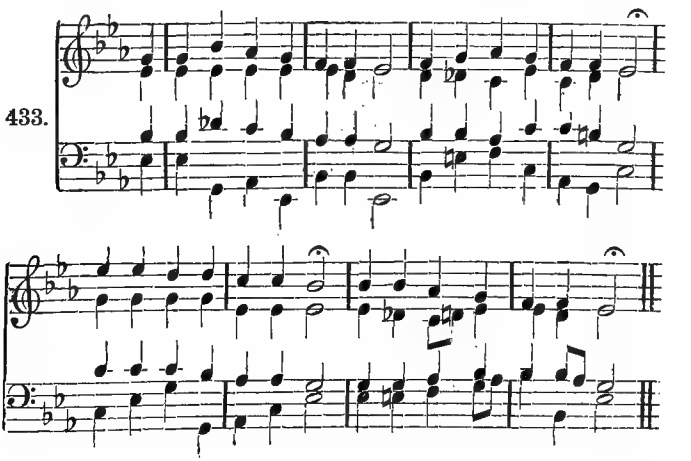
ment of the harmony is as simple as possible, only towards the end we see the voices become more animated. The monotony of the cadences could only be mitigated by the suspensions; even the quart-sext chord, in this connection, could not well be avoided.

As second illustration, we will take the following choral,



the first two strophes of which form a first part, and are repeated as such.

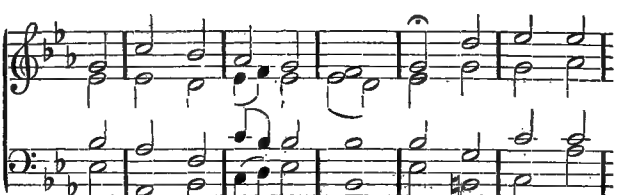
We first fix the key, *E*♭ major, and in accordance with it at I., the close of the whole. After this we decide upon the close of the first part at II., and fix it also in the principal key. For it is impossible to have the cadence in the dominant, the subdominant would be out of place, and the parallel would appear strange and gloomy. But we now discover that the same cadence is requisite for the first strophe, and we shall consequently fix upon the parallel after all. We decide now upon the third strophe; if the



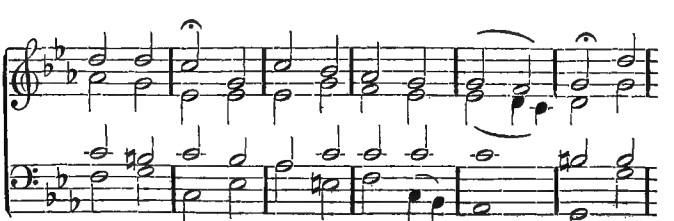
principal key had preceded it, instead of the parallel, it would have been best to end it in the dominant, but under existing circumstances, it will be best, perhaps, to adopt the arrangement of No. 433.

Here, in the first place, we have liberated ourselves, in a degree, from the close position of the harmony; the chords are clearer and more dispersed, and for this reason, already, the voices are freer and more mobile.

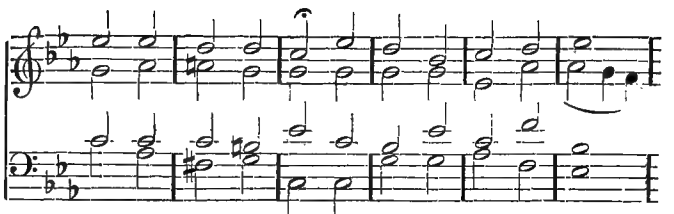
The observations made formerly upon the monotony of the cadences have not been made without results; they have prompted us to enrich the modulation intrinsically, to touch upon the subdominant in the very beginning, and the parallel of the same in the second strophe, &c. It would have been equally easy to enhance the modulation in the beginning, by touching the dominant; the fifth chord might have been *a-c-e♭-g*, instead *e♭-g-b♭*. The following choral, by Graun, is treated in this manner. Graun repeats the first two strophes which form a first part, with different harmonization; the words of the last strophe, too, are repeated in a coda, and in both repetitions the composer clings to the harmonic system of the ecclesiastical keys, to which his choral in reality, belongs, and with which we have at present nothing to do. But the remainder confirms the just-mentioned principles.



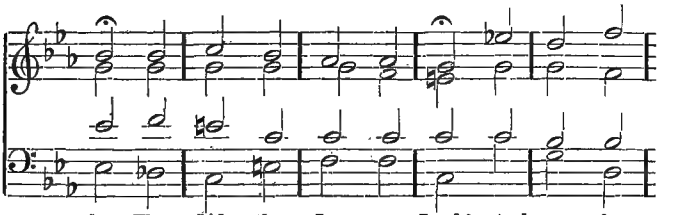
"O Thou, whose tears were flow - ing, When Zi on



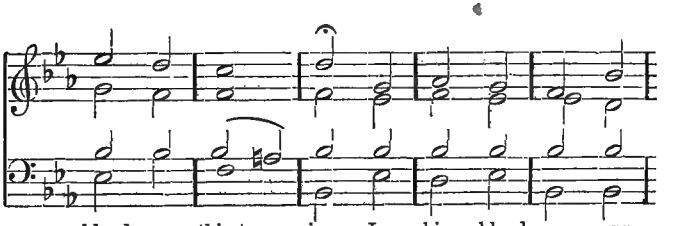
was in sight, Re - solved on deeds of e - vil, Ap-



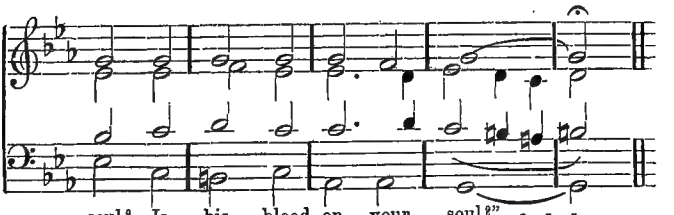
proach-ing its de-cline. Where is the cave, the val



- - ley That hides thee, Je - sus, Lord? And ye for



blood now thirst - ing. Is his blood on your



soul? Is his blood on your soul?" - - -

CHAPTER IV.

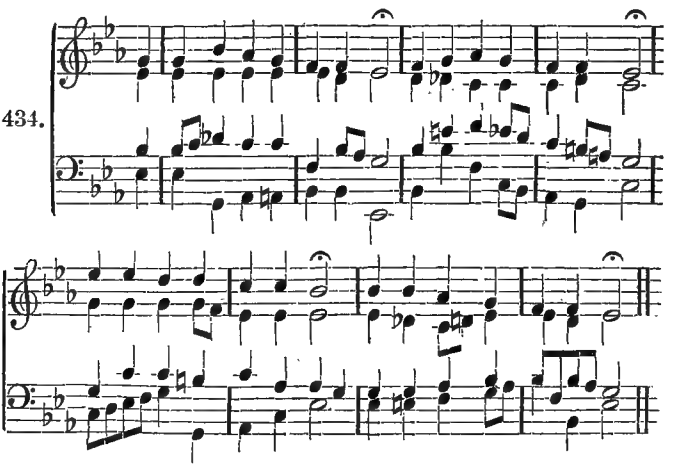
THE HIGHER TREATMENT OF THE CHORAL.

In the preceding chapter we have executed our task in the simplest manner. The voices were employed, almost exclusively, in the representation of the harmony, rarely in suspensions or passes; the harmony, itself, kept as close to the requisites of the melody as it possibly could, without becoming meagre and weak.

The principles of modulation will of course remain the same, even in a higher conception, for they are based upon the very elements of harmony; but we have already been taught to consider the *voices* as the motive power of the harmony, because by their combination the harmony is formed. Suspensions, passing-tones, assistant tones, &c., have also furnished us with the means to give to our voices the necessary melodic connection, flow, and pliancy.

And this is what we miss in the former treatment of our chorals. Let us compare, for instance, the treatment of the last (No. 433) with the treatment below,

434.



and we see, with almost the identical harmonies, a higher animation of the voices, and through them of the choral.

This is the higher character at which we aim for the present. We no longer conceive the choral as a congregational song, but conceive it as an artistic work, to be executed by four animated, *i. e.*, melodically-expressive voices. Though our present means do not always permit us to elevate the voices to an animate melody, without dimming the choral melody, we shall endeavor not to neglect any voice entirely, or more than is absolutely necessary.

For this purpose we must now bestow some attention upon the vocal element.

A.—*The Characters of the Voices.*

Since we purpose, however, to elevate the accompaniment-voices to animate song, it will be appropriate here, to speak of what we might call

THE CANTABILITY OF VOICES.

With this expression we shall designate, *firstly*, the position and progression of voices, which enables the human vocal organ to execute easily and conveniently. *Secondly*, we understand by it the quality of a voice of being conceivable, comprehensible, and the quality arising therefrom of being easily represented, be it now in vocal or instrumental music.

It is clear that comprehensibility and representableness can exist in a voice in different degrees, and that it is absolutely impossible to designate to what degree a melody ought to be comprehensible. It is more important to know on what basis the comprehensibility of a voice rests.

It can have a physical or a mental reason.

A physical reason of incomprehensibleness, or a less degree of comprehensibility, can only lie in the impossibility or difficulty which meets a voice or instrument, to reach a tone or a tone-combination, and to represent it. Thus, some tones are too high for a voice, others too low; some tones cannot be reached on some instruments; some combinations cannot be represented, or are at least only represented with difficulty. Such considerations, however, do not belong here, but will be treated of in the science of vocal and instrumental composition. For the present it is sufficient to know that intervals extending beyond the octave are generally difficult.

The mental reason of comprehensibility or incomprehensibility rests upon the consistency of a tone-proportion. Tone-proportions are comprehensible and representable as soon as we conceive them; and the more so the clearer and surer we conceive them. For this reason there are no more comprehensible tone-proportions than those of the major scale and the first chords;—therefore, the minor scale, and particularly its superfluous second, is more difficult to comprehend. And thus we say that the latter developments must necessarily be more difficult of comprehension, for they are based upon more or less intricate suppositions. Thus, the development of the tone and harmonic system proves on one side the progressive difficulty of comprehension, while on the other side it enables him who has comprehended the connection of the whole, to comprehend the more distant and last formations as easily as the first.

Therefore, is a voice most comprehensible and "*singable*" when it progresses in the order of the scale, or in thirds, or from one to another connected chord, particularly in its nearest intervals. A voice proceeds also, generally, more easily to connected harmonies of the same scale, than to foreign tones; and, if to the latter, sooner to nearest-related than to more distant tones. We perceive now, already, that we need but follow our previous rules of harmony and progression, in order to write that which may easily be sung.

The characterization of the voices is justly based upon the *tetraphonic* composition, as the *juste milieu*, which has sufficient means for most and the most important harmonies, without adding difficulties to the treatment by being overloaded. It is for these reasons that we can call it the *normal* composition.

But the four voices are not merely called after the four principal voices of the vocal chorus, but they are characterized accordingly too. If we exceed this number of voices, one or more of the principal voices are taken one, two, or more times.

In every more than duophonic composition, we distinguish now, first of all,

OUTER VOICES, and
MIDDLE VOICES.

Treble and Bass are outer voices, Alto and Tenor are middle

voices. If there are several trebles and basses, the highest treble and the lowest bass are the outer voices.

The outer voices, in the first place, have the most space for their movements; the treble above, the bass below. They are, therefore, most capable of rich development, wide passages and intervals.

In the choral, as we treat it at present, the upper voice has the melody. This melody is the property of the church, and of the religious service; it must not be altered, and is therefore called

CANTUS FIRMUS.

Next to it, however, the bass is the most effective and important voice. Both of these outer voices, on account of their position, are also the most conspicuous. We must bestow, therefore, more care upon their progression than upon that of the other voices. If any one voice has occasionally to be sacrificed, it must not be one of the outer voices, unless for some very important object.

The middle voices are enclosed on both sides, the alto by treble and tenor, the tenor by alto and bass. Their character is, therefore, less free, their movement must be quiet, and their progression rather in smaller than in larger steps. Sustained tones and suspensions are principally their property; progressions in large steps should not be suffered, except for some particular reason.

When we now approach the particular character of each voice, and bear in mind the representation of the four principal voices, we perceive that the four voices form, as it were, two separate couples:

TREBLE and ALTO, the female (or boys') voices, and
TENOR and BASS, the male voices.

The TREBLE is the upper voice of the first couple, the TENOR the upper voice of the second couple. This observation enables us to enter more deeply into the actual character of the middle voices.

The TENOR, the original upper voice of the male voice-couple, has lost the free movement of an upper voice, in consequence of the existence of a higher voice-couple, which made it a middle-voice. But often, even if but for a short phrase, and particularly in cadences, it likes to assume the free movement of an upper voice,

and instead of seizing upon the nearest, it departs from the higher voices more than necessary, or ascends beyond the alto.

The ALTO is the lower voice of the upper voice-couple, but it lacks the manly vigor of the bass, and the space for its free movement. Thus, it is absolutely middle-voice, and preserves a certain passiveness against the inroads of the tenor, clings more to the upper voice, and moves more quietly and cautiously than any.

The BASS, on the contrary, is a free, and manly, and vigorous under-voice, and loves a dignified, often bold progression. As such we have known it in our very first attempt at harmonization, and as such we have tried to preserve it. It, too, sometimes breaks in upon the other voices, but then it is done in keeping with its character, in bold, decisive, and large steps, by itself, in juxtaposition to all the other voices.

Thus much, for the present, of the character of the voices. Applying the above to the string-quartett, we would give the tenor part to the viola, the alto to the second violin, while first violin and contra-basso, or violoncello, would represent the outer voices. Applying it to bassoons and clarinetts, the first bassoon would have the character of the tenor, and the other instruments share in the remaining voices.

It is different with the piano forte; for, apart from the general character of higher and lower tones, the different tone-regions of this instrument have all the same, or rather, no particular char acter. But if a composer has constructed his voices characteristically, the listener will inadvertently transfer the character of the construction to the tones of the instrument.

The *organ*, by means of the pedals, is enabled to represent the bass at least characteristically.

B.—*Application to the Choral.*

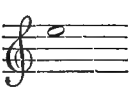
In our future treatments of the choral, we shall endeavor, FIRSTLY, to give our voices a higher melodic animation. We know that the strength and the merit of a melody do not depend upon the number of its notes. On the contrary, an accumulation of smaller measural parts would deduct from the rhythmical strength of a melody, instead of adding to it. It is the mix-

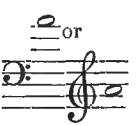
ture and contrast of slow and rapid steps, and their employment for *designs*, which gives significance, animation, and variety to the rhythm.

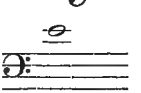
We shall endeavor, SECONDLY, to lead our three voices characteristically. We have to bear in mind here, not merely the rhythm, but the tone-contents also—as far, at least, as modulation and position have left undecided. The more vigorous and quiet moments appertain generally to the bass; the passionate ones we shall give to the tenor, and the alto will cling to one or the other of its neighbors.

Nor must we forget the compass of the different voices, as upon it, too, depends the characteristic of the voices. We shall lead

the *Treble* not lower than , nor higher than

the *Alto* not lower than , nor higher than 

the *Tenor* not lower than , nor higher than 

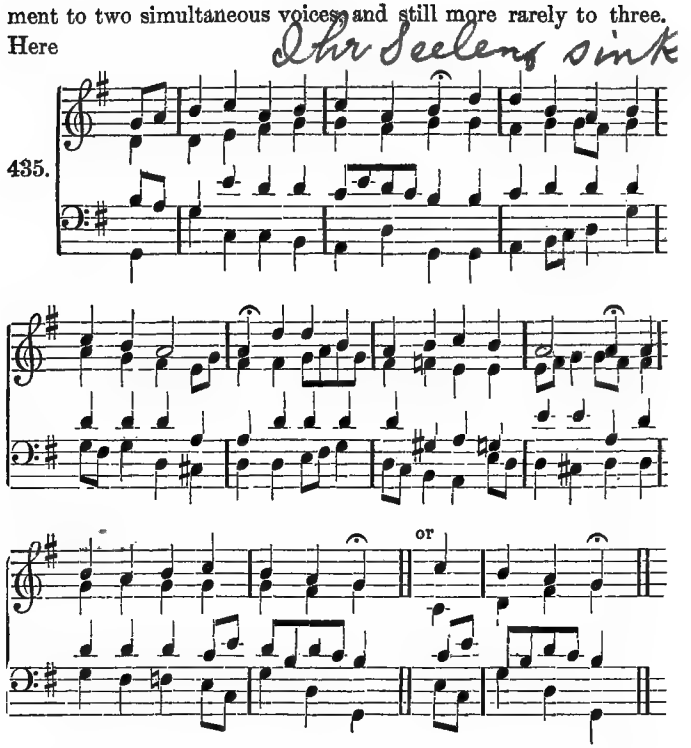
the *Bass* not lower than , nor higher than 

only, when the bass ascends or descends by octaves, or whenever we can unhesitatingly take the higher for the lower octave, we shall permit ourselves to use lower tones. This restriction will also have the advantage of guarding us against too great dispersion of the voices.

But since the higher animation of the voices tends greatly to increase the tension of the choral, we shall at first lead our voices quietly, and moderate the use of bye-tones, so as to enable us to sustain the uniform movement of the whole, and to increase the animation rather than decrease it.

For the same reason, and in order to avoid the overloading or obscuring the harmony, we shall but rarely give a richer treat-

ment to two simultaneous voices, and still more rarely to three. Here



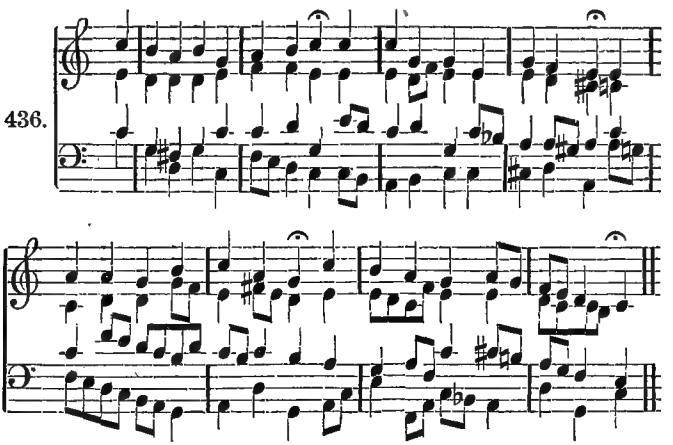
is the first choral treated according to these principles. The most conspicuous moment of the above is the end-tone of the second strophe, which strophe is afterwards repeated as third strophe. This end-tone lasts three beats, and a single harmony, however much varied by suspensions or other means (as in No. 431) would not satisfy us; we had to employ different chords, and reserve the cadence for the last beats.

The modulation of the first two strophes is the one which was nearest. In the third strophe, in order to avoid the monotony of a repetition or a halt, we thought at first of the key of *A* major as dominant of *D*; but *A* major being too distant from the principal key, we preferred *A* minor (the parallel of the subdominant), and resigned even this key in the very next chord, *e-g-b*. In the last strophe we have touched upon the subdominant.

The examination of the voices is left to the student; the tenor is least favored in the middle voices.

Below will be found two more chorals which the student will do well to examine attentively. The deviations from general rules have not been made therein without some particular reason, and at every such point, the student should not rest until the deviation has been sufficiently justified.

436.



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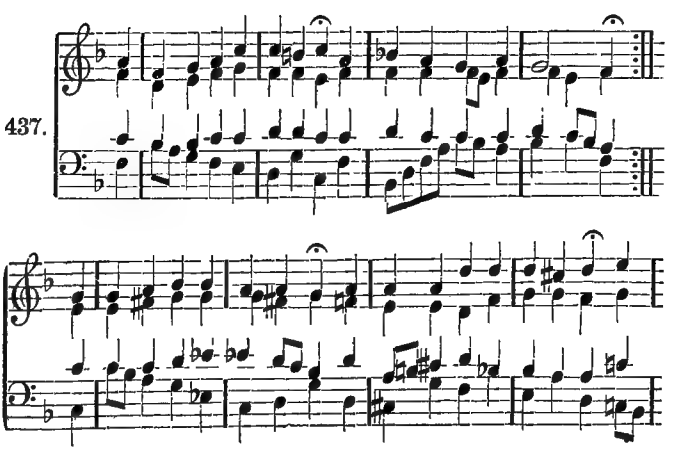

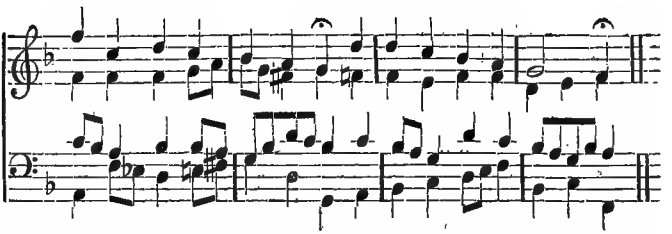

The importance of the choral, as an educational medium for the student, and as a part of the religious service, prompts us to return to it once more, and to direct attention to two different points.

1.—TECHNICAL DIFFICULTIES.

These can only exist in the melody when it requires a particular execution of the harmony, or where it stands in the way of a good progression of the voices. The former is the case when a tone or a phrase is repeated several times in succession, or when it takes a turn which prohibits a dignified and rich development of the harmony. The latter is the case in melodies which skip restlessly about, when it often happens that this unsteady movement is communicated to the other voices, or causes a collision with the melody. It will be best to consider the single cases.

A. TONE-REPETITION.—Those who know how many harmonies can be made subservient to one tone, will have no difficulty in surmounting this obstacle: they will merely have to care for a consistent arrangement of these different harmonies.

B. PHRASE-REPETITION.—This is of frequent occurrence in chorals, and requires an attentive consideration. Sometimes the intent of the choral is such that the modulation of such a repetition should *not* be varied, or, at least, but slightly. Frequently a good arrangement of a few near harmonies can do more than the roaming in the most manifold, distant, and unexpected chords. On the following page is the second part of a choral, as illustration.

It can be seen at once that this phrase admits of many and richer treatments; but it would be difficult to find a treatment better in keeping with the intent of this choral.

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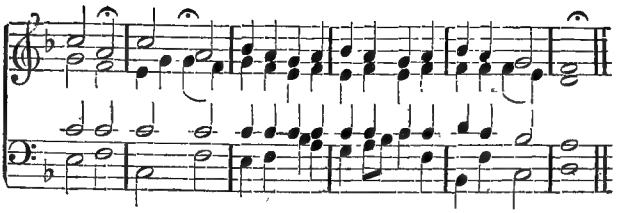
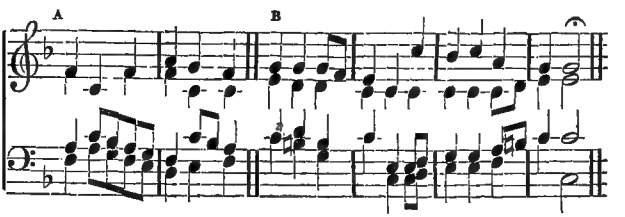


Unfavorable to dignified, ecclesiastical harmony, are such melodies or parts of melodies as cling too firmly to one single chord, and thus threaten to exclude other harmonies. Here

439.



is such a case. At A we have treated the first measure triphonically, and the tetraphonic harmony of the next measure is the more effective. At B we have balanced the skipping unsteadiness of the melody by the calm steadiness of the harmony.

2.—ARTISTIC AIM OF CHORAL TREATMENT.

Harmony and melody are merely the means of expressing what moves our soul, and what the choral is intended to arouse in the hearts of the singers and listeners.

In works of unrestricted art it is the aim of the artist—of his inner promptings and conviction—to seize what is right; science cannot directly assist his prompting, and his conviction is not a subject for a musical theory.

But the treatment of a choral is not a work of free or unrestricted art, for it does not issue from the unfettered spirit of the artist. The principal matter (the melody) is given, and influences everything else—rhythm and harmony, more or less. In such case we can only express what the *cantus firmus* permits or occasions.

Therefore, we advise the student first to investigate the meaning of every single choral, to seize the current which issues from

the melody and influences the other voices and the modulation. This current cannot be seized by touching upon all possible harmonies, but by a steady development. We must consult what harmony is the first upon which the melody insists, and thence we move on steadily, without rest, never remaining stationary without sufficient reason, or returning to something previous, but never passing the nearest to seize something strange or new. Oddity and unexpectedness belong to the *dilletante;* that only is truly proper which strictly appertains to the object. This course will indicate to us the proper modulation, and the progression of the voices.

CHAPTER V.

THE CANTUS FIRMUS IN OTHER VOICES.

Until now we have always employed the upper voice as abode of the principal melody; but it is also possible to make one of the other voices the abode of the melody, and in that case we have to consider two points.

1. The *cantus firmus* will not appear with the same clearness as in the upper voice, and we shall have to arrange the other voices in such a manner that the *cantus firmus* can be distinguished from them.

2. The upper voice, though no longer containing the principal melody, will still absorb considerable attention, and we must, therefore, develope its melody with great care in order to make it satisfactory as the conspicuous part of a whole. In bass and middle voices we can permit occasionally an unmelodious progression, in the upper voice we must not do it.

On reconsideration of the means for the formation of an upper voice, as given in the last chapter, we find that they are not quite sufficient. The accompanying voices move in quarter and eighth notes, exactly like the principal melody. This similarity, and the manner of our present treatment, (the simultaneous beginning of all the voices) give us but little hope to distinguish the *cantus firmus* from the other voices, as soon as we take it from the upper voices. Only with more means, and in a later form shall we be enabled fully to accomplish this object.

But this later form requires some preliminary practice, and this practice can best be introduced here, where we speak of the *cantus firmus* in the upper voice. It requires but little instruction.

If it depends upon us, to which of the three lower voices we shall give the *cantus firmus*, we have to consider the *tone-region* first. If a melody lies high, it will be more appropriate for the tenor than for alto or bass, unless we transpose the choral to another tone.

Then we have to consider the *character* of the melody. One quickly progressing, will be more appropriate for the alto; one moving upwards, will be better for the tenor; one progressing in wide steps, inclining towards below, will be better for the bass. The tenor, in general, is most suitable to take the *cantus firmus.*

Having made our choice, or having a choice made for us, we first fix upon the plan of modulation, sketch the harmony, and attempt, first of all, to make the new upper voice as consistent and flowing as possible. Where, with one harmony, this is not possible, we select another, or a more favorable position of the same, and finally we complete the work by carrying out the other voices. As illustration, we take, here,

A.—*The cantus firmus in the Alto.*

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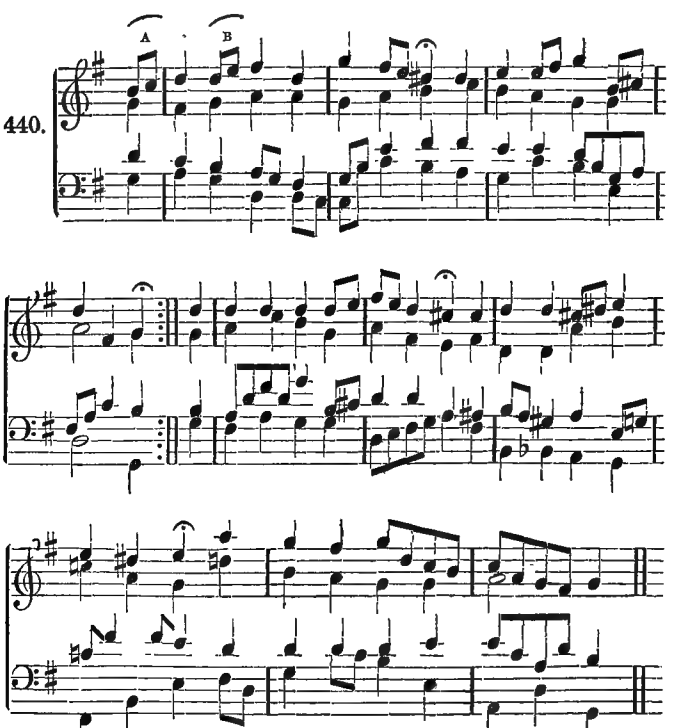

We perceive, first of all, that on account of its tone-region and moderate movement of steps, the *cantus firmus* is particularly appropriate for the alto; the seventh and eighth measures only depart from the character of the alto. Considering the whole, we find confirmed what we have so lately said, namely—the insufficiency of our means for the proper distinction of the *cantus firmus* in the lower voices. Here, evidently, every other voice is more richly developed than the *cantus firmus*. If we were to avoid this, for instance, thus,

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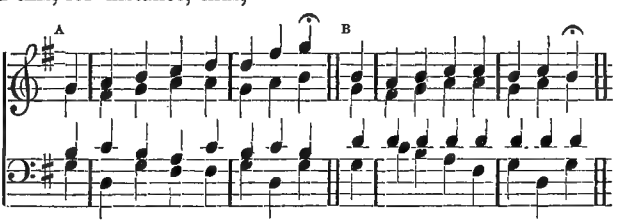
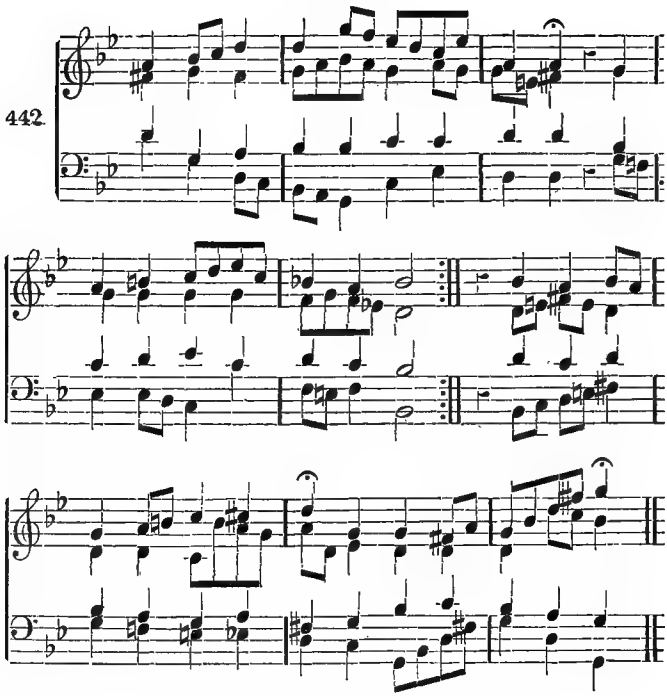


all the voices would become an indifferent, uncharacteristic tone-mass, whether we select the above harmonies or others. Nothing but a doubling of the *cantus firmus*, or a conspicuous tone-medium would serve us to distinguish it from the rest; this, however, is not our purpose at present.

B.—*The cantus firmus in the Tenor.*

We know already, that the tenor, as upper-voice of the male choir, is more appropriate to the *cantus firmus*. Considering now the relations which are called into existence by this position of the *cantus firmus*, we perceive that it separates the bass from the other voices, while the higher voice couple, treble and alto, still remain intimately connected. This teaches us, then, that the bass, being sole and independent, will have to be constructed with particular care, because, its isolated position makes it more conspicuous. The two higher voices, however, will cling to each other, and mutually support each other by means of suspensions, progressions in thirds and sixth, or, at least, close position. We need hardly repeat here, that this is not an absolute law, but merely intended to facilitate and guide our invention.

Most melodies are suitable for the tenor, but particularly so those moving in high tone-regions, or inclining upwards. Here is a former melody, the *cantus firmus* in the tenor.



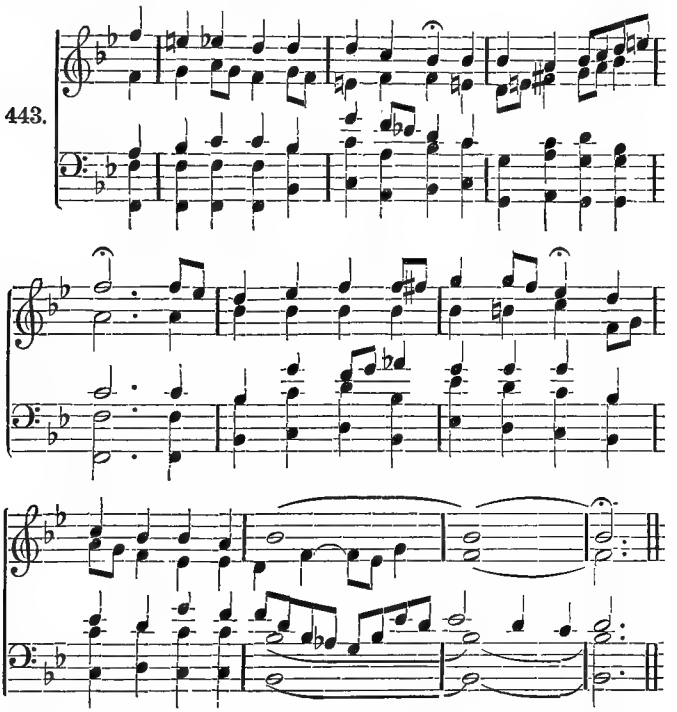
C.—*The cantus firmus in the Bass.*

The introduction of the *cantus firmus* in the bass, brings with it, in most cases, an inconvenience which can only be hidden, not avoided. The reason of this lies in the fact that most melodies are conceived for the treble and tenor, and that consequently they end with the step of a second; the above, for instance, with *c-d*, *c-b*♭, *a-g*, very rarely with the step of a fourth or fifth. It will, therefore, be frequently impossible to form a perfect cadence. This will be still more inconvenient, when the imperfect cadence occurs at the the end of a part or the whole.

How can we now make amends for the weakness of our cadences? The nearest would be a prolongation, then we have the pedal point. But of either means we must make but a limited use, or the whole will be overloaded and spread. We take a former choral as illustration. Its high tone-region makes it

perhaps, less appropriate for our object, and we must, therefore, think of avoiding this inconvenience.

443.



First of all we have reinforced the *cantus firmus* with a lower octave, an addition which does not change it materially.

The plan of the modulation is that mentioned in the first chapter; the third strophe only had to submit to a slight alteration. This strophe, according to known principles, should have closed with a half-cadence in *B*♭ major, or with a modulation to *F* major. But this was not practicable in the present instance, for the closing tone of the *cantus firmus* (*c*), would have forced us to end with a quart-sext chord. We had to consider it as fundamental tone, and to close in the parallel of the subdominant.

We are now at the point from which we can give a clear view of the whole proceeding. It is clear the *cantus firmus* in the bass gives us nothing but a melodically-regulated series of tones, upon

which we have to construct chords, and above which we have to lead the other voices as melodically as possible. Whence above all, shall we now take the chords?

Each bass-tone can be fundamental tone of a triad, a septime chord, and a nonachord; it can be another interval in an inverted chord, it can be a tone foreign to a chord—suspension, pass, anticipation. What shall we choose from the above? We select again, first, what is most necessary for the plan of modulation, then we think of the nearest, or of the most appropriate for the particular case. Thus, our first strophe closes with the dominant chord, (inversion) and the tonic triad; it begins with the dominant triad (apparently in *F* major), then follows, with remaining bass, the dominant chord of the same key, and finally it passes with dominant chord and triad into the principal tone, *B*♭ major. The remainder needs no explanation; the beginning, resembling the pedal-point, indicates the end. Let us now turn to the character of the voices.

The high region, and the ascending character of the *cantus firmus* press the other voices upwards, and limit them to a small space. They have, therefore, formed themselves melodically simple.

CHAPTER VI.

MORE AND LESS VOICED TREATMENT OF THE CHORAL.

We have to add a few words in regard to the treatment of the choral for more or less than four voices, though the most necessary facts have been given already in the tenth part of the first book.

A.—THE CHORAL WITH LESS THAN FOUR VOICES.

The choral, as we know it at present, requires full harmony, at least tetraphonic, the more, since in comparison with other compositions, it so much lacks melodical volume and rhythmical variety. The simple tones, generally of equal measural value and in short strophes, without harmonic volume would be but a mere thin thread. Therefore a triphonic, or perhaps duophonic treatment can only be justified by particular reasons, and with many chorals it will be absolutely impossible to render them satisfactory duophonically.

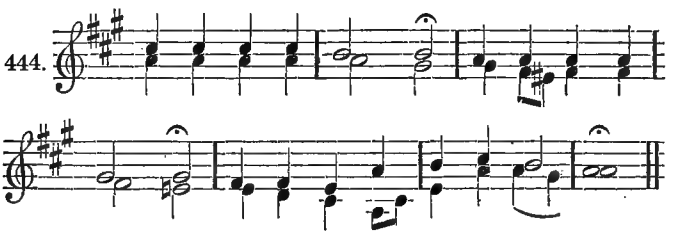
The reasons for triphonic or duophonic treatment are either external, when we have not more voices: or internal, when this simpler treatment conveys a particular expression; for instance, when we intend to represent the whole in a light, free, and transparent manner; or when we have in view a combination of particular voices, for instance, two female voices and a bass, two male voices and a treble, &c.

In all these cases we must select such harmonies as are suitable for a duophonic or triphonic treatment. Many good combinations will have to be sacrificed, and many otherwise less appropriate harmonies will have to be seized. But in either case the melody of the voices requires particular care, because the less voices, the more distinctly will the faults and merits of each be preserved.

1.—*The Duophonic Treatment.*

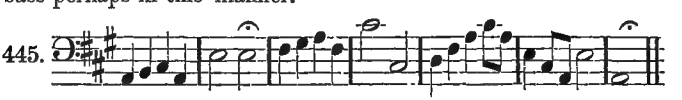
In duophonic composition it will be necessary to construct the accompanying voice as simply as possible. It is best to keep

the voices together, and to limit them to the most necessary intervals. Thus the following choral might be treated in this manner:



The second and third strophes begin with a suspension, under the supposition that there is but a small or no pause between.

If, for particular reasons, two more distant voices are taken, it will be better to give to the accompanying voice a peculiar characteristic; for the two voices, under any circumstance, will not be well connected. The above phrase would, therefore, be more appropriate for treble and alto, or tenor and bass, than for treble and bass. In the latter case it would be better to construct the bass perhaps in this manner.

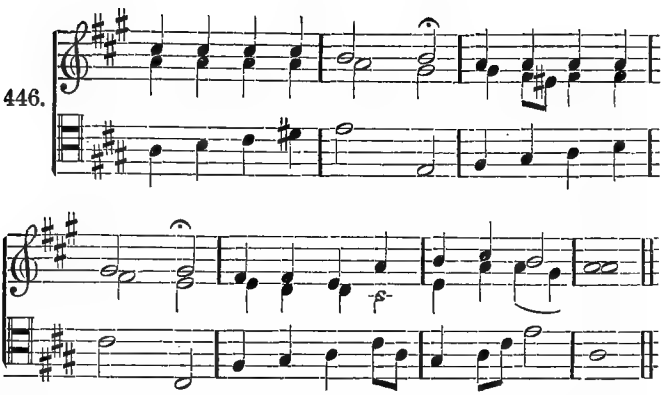


2.—*The Triphonic Treatment.*

This treatment is not merely richer in tones and harmonies, but it admits also of a freer and richer development of the voices. For the *two* voices at its command are by themselves already sufficient to give a character to the whole, in case we should go beyond what is absolutely necessary. And since a richer development of the voices is permitted, we have also the means to make up in melodical volume and fullness of the single voices what we lack in numbers of chord-tones. Harmonic bye-tones, suspensions, and passing-tones will do justice to our harmonies, and at the same time melodically perfect our voices.

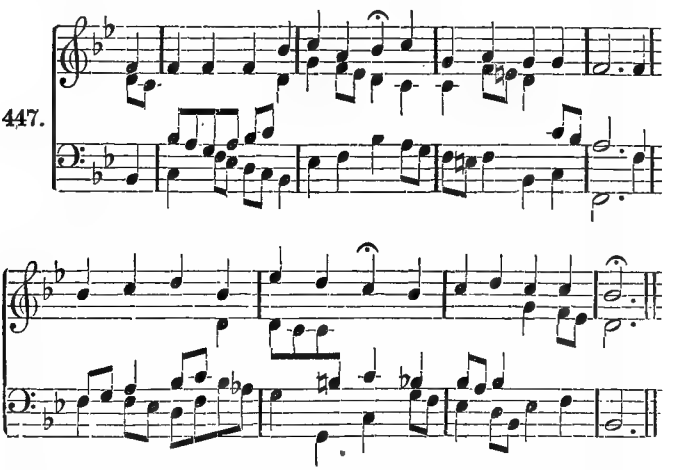
But we must not lose sight of the character of the choral. A triphonic treatment of the last choral is given here, merely to remind us that the greatest simplicity can often be sufficient.

446.



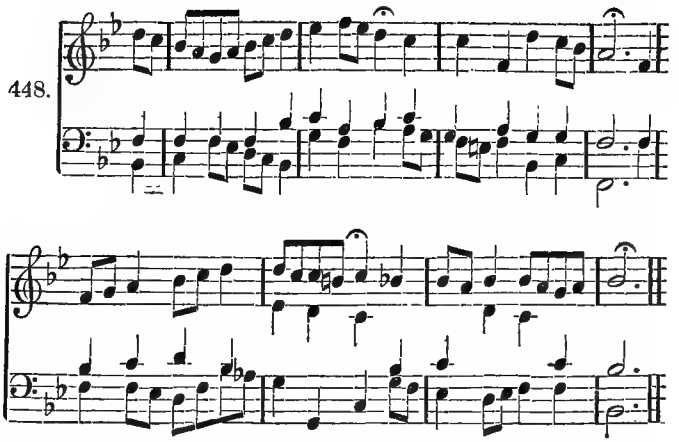
The voices in the following are developed in a richer and more mobile manner.

447.



The triphonic choral is also well fitted to have the *cantus firmus* in the lower or middle voice. This requires no instruction, and simply as example we give here the above choral with the *cantus firmus* in the tenor.

448.



B.—The choral with more than four voices.

We are convinced that the tetraphonic choral is quite satisfactory in regard to harmonic volume and fullness. Therefore we shall never write a choral for more than four voices, except for particular reasons; sometimes only we add to the last strophe, or to the last chords of a choral, another voice, in order to obtain a full ending. For either case the information given in the second chapter, tenth part, of the last book, will be sufficient.

CHAPTER VII.

HOW TO ACQUIRE FACILITY IN THE HARMONIZATION OF THE CHORAL.

We have always maintained that a choral (or any melody) can be treated in various ways, and that there is no absolutely *best* treatment possible, but that object and circumstances give preference at one time to one, at another time to another treatment. We require, therefore, the capability and the facility to harmonize a given melody in various ways.

We have given the means in former chapters, and can add nothing new, but we repeat here that the practice makes us conscious of our powers, and we now merely indicate how the most manifold treatments can be obtained from a single melody.

There is an *external* and *internal* variety of treatment.

The external variety consists in the fact that a choral can be treated duophonically, triphonically, tetraphonically, and polyphonically; that the *cantus firmus* can be placed in the upper voice, the middle voices, or the lower voice. These are the external forms of choral-treatment, as far as we know them at present. Each of them, however, can be carried out in the most manifold manners; we can make use at the same time of different harmonies, and different construction of the voices; we can transpose the *cantus firmus* as well in the triphonic as in the tetraphonic and polyphonic choral. But placing aside all these various forms, we will limit ourselves to the tetraphonic treatment, and to the *cantus firmus* in the upper voice.

The *internal* variety, to which we have thus limited ourselves, is based upon the different modulation, harmony, and construction of voices which we can give to a choral melody. The construction of the voices is the easiest, and therefore least important to us; it is conditioned, essentially at least, by the choice of chords. We shall merely remember to make them as melodious as possible.

But the modulatory and harmonic design or sketch are the

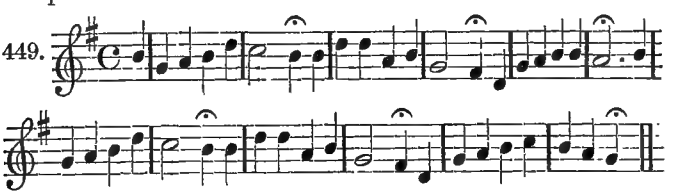
most important for us. How can we always find new modulations and harmonies, without trusting to chance? The reply to this question and the necessary instruction, constitute the contents of this chapter.

In general we can only repeat what we know already.

We first ascertain the key, and fix upon the principal moments, the ending and turning-points of the modulation, accordingly. Next to the principal key we must ascertain of what modulation the close of each strophe admits. Here we take the nearest first, and pass thence to the more distant. And to these end-points we lead our harmony, employing first the nearest, then the most appropriate, and finally those in general admissible, taking advantage, however, of the slightest alteration which opens to us a new way. This will result, also, in designs and directions of the bass, at which we have to consult how they can be employed in one or the other manner.

But now to work. We take the following choral, and simply because it contains the greatest number of repetitions in the smallest space.

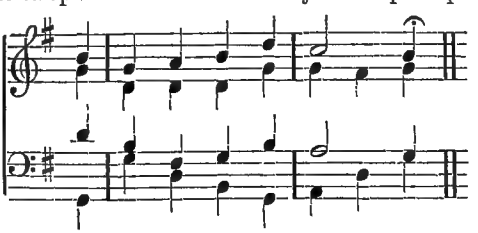
449.



We shall merely give beginning and indication, and it remains for the student to carry it out.

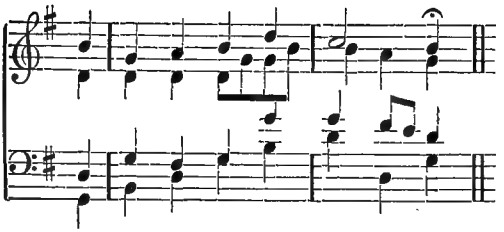
The first strophe is the most naturally in the principal key.

450.



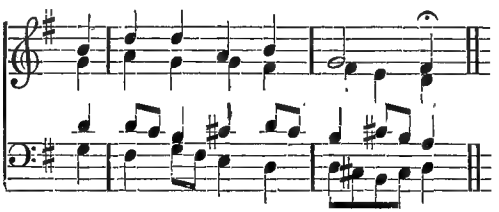
We have taken the tonic chord for the first two tones, and led the bass in a higher octave. Let us now attempt to lead the bass in an opposite direction.

451.



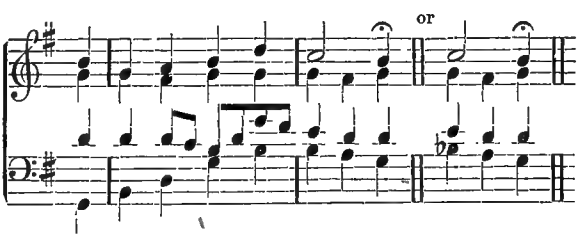
The bass ascends rather far, and forces the middle voice to an equally passionate ascension. If we were to begin in this manner, the following strophe would have to avoid such exaggeration, but in its stead we might exhibit a more marked direction. It might, perhaps, be thus:

452.



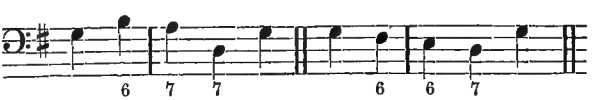
But let us return to No. 451. The exaggeration of the bass lies particularly in its last step upwards; the middle voices have to ascend so high, because they have begun too low. This gives us a new treatment.

453.



The bass, from the fourth tone, might also have proceeded in this manner:

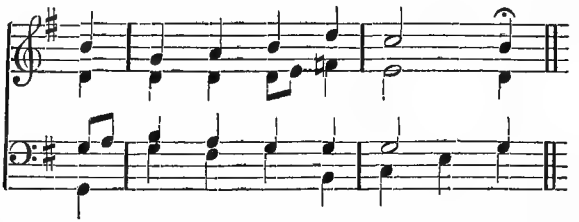
454.



but in all these cases it would be advisable to employ for the second strophe a less extended progression of the voices.

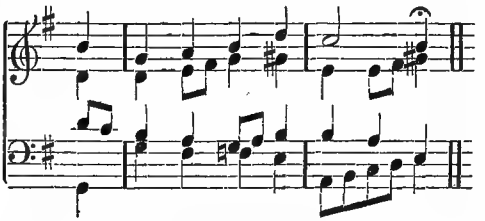
Both these fundamental forms exhibited a bass progressing in wide steps. Let us now attempt a more quiet melody for this voice.

455.



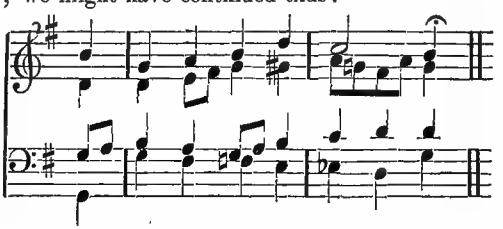
We might continue the diatonic movement of the bass, perhaps thus:

456.



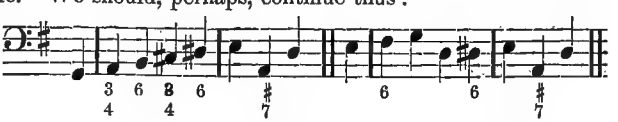
The bass descends here chromatically, and ascends again diatonically. But there was no need of discontinuing the chromatic progression; we might have continued thus:

457.



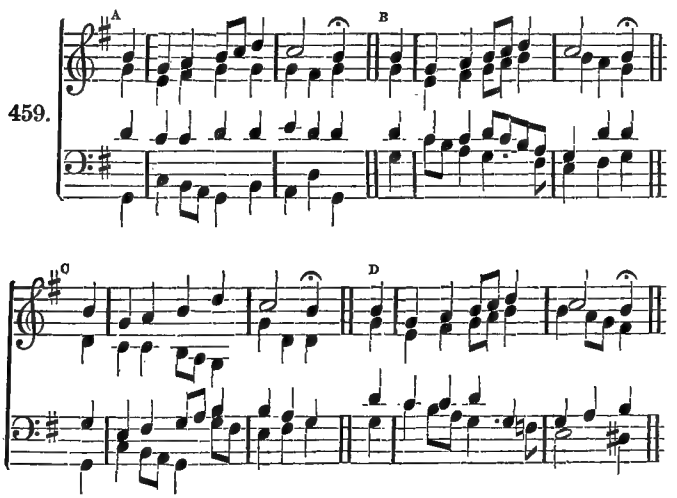
and this would have enabled us to close in the tonic, instead of modulating at so early a moment to the parallel. If we were to continue either of the above, we should prefer a diatonic progression, because the chromatic progression would embarrass us by the smallness of the steps, and by their being harmonically so unlike. We should, perhaps, continue thus:

458.



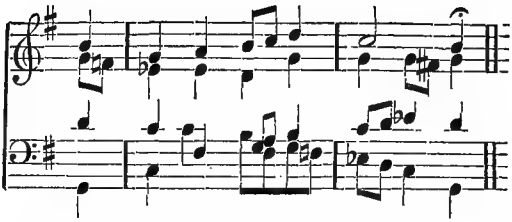
We must break off here, in order not to anticipate too much for mere indications. All these formations are based upon the first two chords, being the triad of *G*, or perhaps an inversion of it. Let us now depart from this first harmonization. We retain the tonic chord for the first tone, but we must find a different harmony for the second. What now can the tone *g* be? We have already considered it as fundamental tone, but it can also be third or fifth. The latter leads us to the subdominant of the principal tone, and is, therefore, the nearest. Sebastian Bach has solved the question for us in four different manners. Here they are:

459.



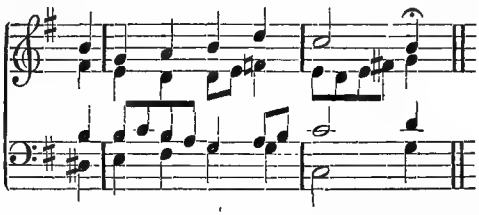
We leave it to the student to analyze and examine the above, and turn at once to the second *g* as third. Of what?—of *e* or *e♭*? The latter would not remind us of *E♭* major (because *b* preceded it and soon follows), but of *E* minor. It is true that this tone is rather distant from our melody, and cannot well be justified in connection with the whole. But such treatment is not absolutely impossible or useless, and we, therefore, give here an illustration.

460.



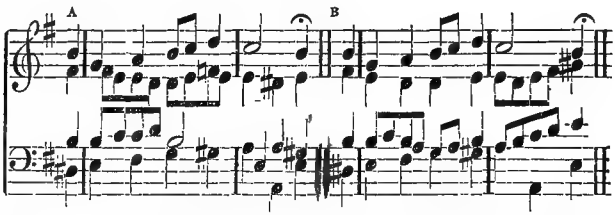
But it lies much nearer to consider the *g* as third of *e*. As such it leads us to the parallel of the principal tone. Here

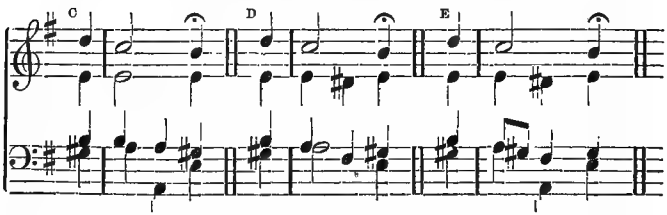
461.



we have just touched it, without remaining in it. Bach has employed it thus, in five treatments:

462.

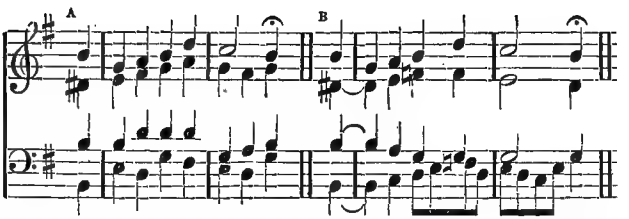




Sometimes (at A, D, E,) he has actually modulated to *E*, and closed with the major triad. At other times he has merely passed from *E* minor to *A* minor.

In the above we have always begun with the sext chord. We might, also, begin with the fundamental chord.

463.



We have attempted it here twice. At A we have developed a consistent progression in the bass. At B we have retained the tone *b* in the bass, and the middle voices were consequently influenced in like manner, and from the chord *b*-*d*♯-*f*♯ we have been led to the superfluous triad *g*-*b*-*d*♯, or rather its sext chord.

But we have gained enough from this simple melody. A retrospection upon our work would give us the feeling of the young anatomist, who was forced to bury his knife in the most charming formations of nature. He followed the path of reason and searched for knowledge.

We have only been able to indicate rules and facts. Everybody who has followed us attentively thus far, will see at once that we have exhausted nothing. But we hope we have gone far enough to indicate how important this practice is, and that though succeeded by other exercises, it is in fact the cap stone of the practical contents of the whole First Part.

Second Part.

The Chorals in the Ecclesiastical Keys.

It has already been stated (last part, chapter I.) that many chorals belong neither to our major nor minor modes, but to a former system of keys, and that they cannot well be treated according to our modern system of modulation. They require a different modulation and harmonization, *i. e.*, one corresponding to that old system. Their melodies even, independent of harmony, do not agree with our principles.

To treat such chorals properly, we must first be familiar with the keys in which they are written; at least enough so to judge of and select the harmony. This study belongs perhaps more to the history of music;—but we cannot well comprehend an historical subject, without having at least an outline of its history before us.

The familiarization with the ecclesiastical, or antique keys, as they are sometimes called, will bring with it another advantage. These keys have been developed long before our present system of keys and modulation was in existence; they have finally led to the latter. They had to lead into our system and to be lost in, or submit to it; for in *our* system there lives a higher and more general truth; and in *it* only was a progress of music possible. Considering it from this point of view, the former system does not merely appear deviating from, but preparatory to our present system. There were then other ways of modulation; and as we analyze the points to which these ways have led, we gain a new view and confirmation of our present system. The latter gives us for every general purpose the nearest means. It tells us, for instance, that a perfect full cadence (with tonic in the highest and lowest voices, and the final chord upon a rhythmical chief-part) forms the most satisfactory ending of a composition. But the antique melodies exhibit attempts of *not* ending with the dominant chord, or *not* upon the tonic harmony. Nay, the tonic and its harmony is often not even the basis, the beginning and end of the whole tone-movement.

These attempts are the results of an intellectual conception of the tone-element, the births of a truly inspired, songful period, they are opinions full of truth,—a truth which stands and will stand firm,—though they have been unable to establish themselves as general laws. They are not the arbitrary attempts of a few, but they are results and experiences brought *down* to us from one of the most eventful and important epochs in the history of art, and as such, if they otherwise agree with our present principles, they form an important confirmation of the latter.

But this confirmation and agreement is exhibited, not merely in what the ancients did according to our manner, but also in what they deviated from it. Thus they deviate, for instance, in their cadences, wherein they had a *different* object; and afterwards they achieve that object exactly according to our present general laws.

The most essential point of our theory is to follow the old masters in their ideas, to obtain from them the truth therein contained, to conceive their melodies in *their spirit*, to harmonize them according to *their* ideas. Independent of this, there is much in the old chorals which has ceased to be essential for us, because it was not conditioned by the ideas which led the ancients and influenced their works. To the latter, among others, belongs the fact, that their system did not contain all the tones which we possess. At first they had only the scales:

$$c, d, e, f, g, a, b, c,$$

and

$$c, d, e, f, g, a, b\flat, c.$$

The tone chain

$$\begin{array}{cccccccc} c\sharp & e\flat & & f\sharp & g\sharp & b\flat & & \\ c & d & e & f & g & a & b & c, \end{array}$$

came into existence at a much later period.

But the steps and half steps were not of like proportions; $c\sharp$, $f\sharp$ and $g\sharp$ could not serve for $d\flat$, $g\flat$ and $a\flat$;—$b\flat$ and $e\flat$ were different from $a\sharp$ and $d\sharp$. The temperament of the organs of that time did not permit it, and though, at a later period, additional upper keys were introduced for these tones, which led to the even temperament, the principles of the old system retained their hold, and reigned until gradually the modern system became predominant.

It is also known that the ancients did not make use of so many chords, suspensions, passing tones, &c., that their voices were not generally carried out so richly and perfectly as those of our time. But since we shall see that the element of their system did not consist in this, their proceedings will not be binding upon us; we shall write, with due regard to their essential laws, as our object permits us, or prompts us to.

We merely add, that we have not retained their often effective rhythm, but have adopted for our theory the melodies, as they are sung at present in our churches.

CHAPTER I.

THE ECCLESIASTICAL KEYS IN GENERAL.

THE ecclesiastical keys can be regarded from a two-fold point of view: 1st, from a *melodic* point, as *mere scales*, and 2nd, from a *harmonic* point, as scales intended for the basis of harmony (therefore actual keys in our own sense of the word.)

A. *The Melodic Point.*

The succession of seven degrees belongs to all ecclesiastical keys. Former theorists attempt to make every degree of the scale a tonic, and to build upon it, without depression or elevation of a tone, a scale. Thus they obtained the scales:

1,) *c, d, e, f, g, a, b, c;*
2,) *d, e, f, g, a, b, c, d;*
3,) *e, f, g, a, b, c, d, e;*
4,) *f, g, a, b, c, d, e, f;*
5,) *g, a, b, c, d, e, f, g;*
6,) *a, b, c, d, e, f, g, a;*

as the first of which, however, they considered the scale of *D*, (here the second). They might have added a seventh scale, from *b* to *b*:

b, c, d, e, f, g, a, b:

but this scale not even admitting a tonic triad, it could not become a key. The names of the above six keys were:

1. Ionian, from *c* to *c;*
2. Dorian, from *d* to *d;*
3. Phrygian, from *e* to *e;*
4. Lydian, from *f* to *f;*
5. Mixolydian, from *g* to *g;*
6. Æolian, from *a* to *a.*

These theorists acknowledged, in melodic respect, two different positions for each of their keys. Their melody moved *either* throughout, or principally, from tonic to tonic, — or in other

words: from the fundamental tone to its return in another octave. These melodies they called "*authentic;*"—even the whole scale, if moving from tonic to tonic, had that name. From such authentic melodies they expected the character of decision, firmness, transcendant joy, &c.

Or, the melody moved *around the tonic*, perhaps from the dominant to its octave. Such melodies they called "*plagalic;*" the scale, if represented in this form, was also called plagalic. From this melodic form they expected a milder, more animated, softer character.

It is not our object, however, to invent melodies according to the ancient system, but merely to learn the treatment of those in existence. Yet we cannot fail to perceive, that all the melodies based upon the tonic are in possession of a certain authentic strength, while those which move *around* the tonic, have a certain plagalic mildness and flexibility.

B. *The Harmonic Point.*

Of the tone-chains based upon the seven degrees of the scale, those only could become keys which admitted of a tonic chord. The tone-chain of *B* admits of neither major nor minor triad,—the triad upon its tonic (*b-d-f*) being diminished—and consequently could not become a key.

Of the remaining six scales three admit of major triads, *viz:*

the Ionian, *c-e-g*,
the Lydian, *f-e-c*,
the Mixolydian, *g-b-d*.

They can therefore be compared to our "Major." The other three scales have minor triads upon their Tonic, *viz:*

the Dorian, *d-f-a*,
the Phrygian, *e-g-b*,
the Æolian, *a-c-e*,

and might be compared with our "Minor."

Soon, however, we find, that only the Ionian scale actually resembles our scales of major or minor. The others deviate already melodically, and consequently cause deviations in the harmony also.

Leaving aside the Lydian key, and attaching our observations

to that key (the Ionian) which really resembles our major, we find upon its dominant the Mixolydian key, upon the dominant of the latter, the Dorian, then the Æolian, and finally the Phrygian, always based upon the dominant of the preceding one.

Thus we see, as in our Quint-circle, a progression of keys always a fifth distant from each other:

C *G* *D* *A* *E*

Ionian, Mixolydian, Dorian, Æolian, Phrygian,

which must necessarily end with *E*, because the next tone, *B*, does not admit of a key being built upon it. The Lydian key, if enclosed in this circle, should find a place before *C*, Ionian, upon its subdominant.

But this progression of ancient keys exhibits an important difference from our own quint-circle. In the latter we always progress from one key to another similarly constructed one, from *C* to *G*, *D*—in short to all major keys, and they all have the same contents, the same intervals. The other progression, however, leads us every time to a differently constructed key.

The *Ionian*, exactly like our major, has major triads upon the dominant and subdominant, and upon the former the dominant chord.

Next comes the *Mixolydian*. Its tonic and subdominant admit of a major triad; its dominant, however, has a *minor triad*, and consequently has no dominant chord. On the other side again, this scale admits *upon its tonic*, of a dominant chord, which however leads to the Ionian tonic (*c*).

Upon the dominant of the Mixolydian, is based the *Dorian* key. It is a minor key, for its tonic and dominant triad are minor; (as far as we can see, for the present at least) its subdominant triad, however, is major. Upon its dominant is based:

The *Æolian* key, which has minor triads upon both dominants and the tonic.

Finally follows the *Phrygian* key, which upon subdominant and tonic has minor triads, while its dominant has neither major nor minor triad, but a diminished one, which, as it were, cripples the whole key.

The *Lydian* key is similarly crippled by its subdominant, which admits of neither major nor minor triad, while tonic and dominant have major triads.

C. *The Essential Tones of every Key.*

It is easy now to discover which tones are essential in an ecclesiastical key. Those tones are essential which distinguish one key from another; it is natural that we begin with those keys which resemble each other.

Which tones are now essential to, and characteristic of the Mixolydian? 1, *the Third*, for it stamps the key major; 2, *the minor Seventh*, for it distinguishes it from the Ionian.

Which are the characteristic tones of the Dorian? 1, *the Third*, because it stamps the key minor; 2, *the major Sixth*, for it distinguishes this key from the subsequent one, the Æolian.

In the Æolian we must consider as essential: 1, *the Third*, as characteristic of minor; 2, *the minor Sixth*, which distinguishes it from the Dorian.

The Phrygian is distinguished from the Æolian, and from all the other keys by its *Second*, which is *minor*.

The Ionian has its *Third*, the sign of *major*, and its *major Seventh*, which distinguishes it from the Mixolydian.

The Lydian has the *superfluous Fourth* to distinguish it from the Ionian.

D. *Admissibility of Foreign Tones.*

Thus far the ancient system strictly follows the original scales. But it permits also the use of foreign tones, if they do not destroy the essential characteristics of the key. Thus the ancients introduced the major seventh in the Dorian and Æolian keys (*c*♯ and *g*♯), for third and sixth, but not the seventh, are the essential characteristics of those keys.

E. *Transposition and Signature.*

These foreign tones permitted also a second application, by means of which each scale could also be represented upon another than the original degree. This was done particularly upon the dominant and subdominant, and sometimes one or two degrees higher or lower. How was this transposition effected?

We see by the above that none of the ancient keys required a signature; for the foreign tones, if there were any, were merely accidental. They had only to substitute *b*♭, for *b*♮, and the key was a fifth lower; instead of *C* Ionian it was *F* Ionian,

and the Mixolydian was then upon *C*, the Dorian upon *G*; the scales were

F, *g*, *a*, *b*♭, *c*, *d*, *e*, *f*.
C, *d*, *e*, *f*, *g*, *a*, *b*♭, *c*.
G, *a*, *b*♭, *c*, *d*, *e*, *f*, *g*, &c.

The keys originating in this transposition were called *genus molle*, in contradistinction to the original keys, which were called *genus durum*.

In the same manner, the substitution of *f*♯ for *f*♮ transposed all the keys a fifth above. The Ionian was thus upon *G*, the Mixolydian upon *D*, the Dorian upon *A*,

G, *a*, *b*, *c*, *d*, *e*, *f*♯, *g*,
D, *e*, *f*♯, *g*, *a*, *b*, *c*, *d*,
A, *b*, *c*, *d*, *e*, *f*♯, *g*, *a*, &c.

The keys arising from transposition into the fifth above were designated by adding to them the word: "*Hypo*;" for instance Hypo-Ionian, Hypo-mixolydian, &c.

In our modern system we have but two keys without signature: *C* major and *A* minor. If we meet with melodies, which, *without signature*, belong to the tone-chain of *D*, *E*, or *G*, we must consider them as belonging to the Dorian, Phrygian, or Mixolydian of the ancients. The signature of one flat (♭) indicates to us the key of *F* major, or *D* minor, but if we meet with melodies which, though having a signature of one flat (♭) still belong to the tone-chain of *C*, *G*, or *A*, we must consider them as *C* mixolydian, *G* Dorian or *A* Phrygian. The signature of one sharp (♯) indicates to us the key of *G* major or *E* minor. Meeting, however, with a melody under this signature which belongs to the tone-chain of *D*, *A*, or *B*, we must consider it as *D* Mixolydian, *A* Dorian or *B* Phrygian.

We have thus exhibited the general rule of ancient signature in transposed keys. It is immaterial to us that not all keys were transposed in this manner, as we have only to do with the melodies as we find them.

It will now be easy to understand the signature of other transpositions. To represent, for instance, the Phrygian key in the tone-chain of *D* or *C*,—

e, f, g, a, b, c, d, e,
d, e♭, f, g, a, b♭, c, d,
c, d♭, e♭, f, g, a♭, b♭, c,—

·t required in the one case two, in the other case four flats. A melody of the tone-chain *D*, therefore, with a signature of two flats, or of the tone-chain *C*, with four flats, is to be considered as a transposed Phrygian.

Thus we see a series of different keys before us; each can admit foreign tones in its melodies and harmonies; each, also, can be represented by means of foreign tones, in more than one tone-chain, and though until now we have only observed the external deviations of these keys, it is clear that these must also have given them a different internal character, which we shall endeavor, at some future time, to comprehend.

F. *Modulation into other Keys.*

In order to complete our analysis of the ancient system, we must add, finally, that like our own system it possesses the all powerful means of *modulation* from one key into the other, and the combination of different keys in one composition.

We know of two ways of modulating. 1. We follow the path :f the quint-circle, and pass from one major tone to another, or, ɔy means of the parallel, we go from a minor key to another major key, and *vice versa*. 2. We substitute, on the same tonic, minor for major, or major for minor.

The ancients, too, modulated according to their quint-succession—and in still different progressions; but they always found different keys. Or, by means of tone-transposition, they formed a new key on the same tonic—modulated without leaving the tonic—but, here too, they had a vastly greater variety than we with our major and minor.

On the other side again, the more decided, peculiar character of their different keys conditioned it that certain digressions or modulations were absolutely inadmissible, while we, though generally seizing the nearest related key, are not prevented from modulating into every possible key.

Thus much in general of the ancient keys; and now for a separate consideration of each, and its treatment.

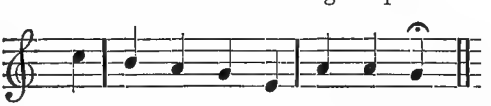
CHAPTER II.

THE IONIAN KEY.

We know already that the Ionian key is the only one among the ecclesiastical keys resembling one of our modern keys—major.—But all our major keys have the same construction, while the ancients, in their Mixolydian, and, if they chose, in their Lydian key, had two more, differently constructed major keys. Thus the character of each, and consequently that of the Ionian also, became peculiarly distinct.

We can see this at once in the order of the modulation. According to the principles of our modern system the modulation in major goes almost invariably first to the key of the dominant, for instance in *C* to *G*; this is the nearest,—but for that reason also the most common, least exalting modulation. But for this very reason, in the ancient church-melodies, it was least liked, it was not high-minded, not festal, not exalting enough. In fact it could hardly stand for an actual modulation. For, what do we find on the Ionian dominant? Either another Ionian tone-chain, (hypo-Ionian) or the Mixolydian key, which, for reasons to be afterwards explained, was as little sufficient to rise from the Ionian tonic.

Therefore, in the reign of the ancient system, we find the modulation into the dominant either entirely avoided, by means of cadences in the principal key or the subdominant, or retarded upon the parallel of the subdominant, if not an actual modulation into that key (*A* Æolian). Thus Sebastian Bach, in three different treatments of a choral with the following strophe:

464. 

forms its cadence, the first time with the subdominant and tonic, and on its recurrence he treats it thus:

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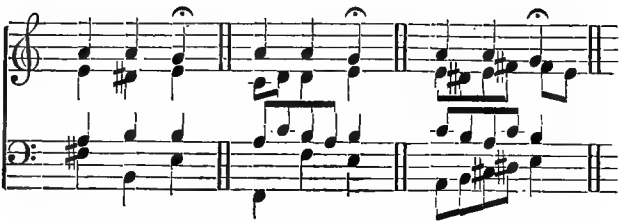

CHAPTER III.

THE MIXOLYDIAN KEY.

We know of it, that it is a major scale with minor Seventh, and therefore with a minor triad on the dominant. It lacks therefore the possibility of a perfect cadence, according to our principles.

We have nothing left, then, but to make our cadence by means of the subdominant; a cadence which we have used occasionally as a half-cadence, and which is generally known under the name of ecclesiastical cadence. This is by no means, however, the only ecclesiastical cadence, and we shall soon arrive at others. Nevertheless there is in the Mixolydian key a dominant chord, but it is on the tonic and points towards the Ionian scale. For this reason has the Mixolydian key a peculiar inclination to modulate into the Ionian. Mixolydian is in fact Ionian in its origin, therefore it takes part in the transpositions of the Ionian. *G* Mixolydian (originally *C* Ionian), like *C* Ionian goes into *F* Ionian; a modulation which lies very far from our *G* major.

In order to exhibit the peculiar characteristics of this key we give here a Bohemian choral. O Christenmen

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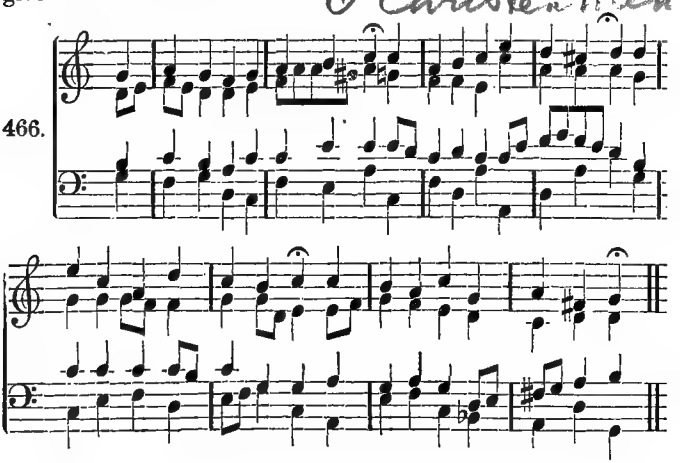

CHAPTER IV.

THE DORIAN KEY.

The Dorian is the first minor key of the ancient system. We know already that it has a major triad upon the subdominant, and that it can change the triad of the dominant into a major, by introducing *c*♯. Thus the major element is predominant, and the minor of the tonic cannot impress us *sadly*, but merely with a deep earnestness. This is the character of this key. Severe and strict, but not sad, it was the key to which the ancients entrusted their most solemn music, for instance the *Credo*, and in short most of their ecclesiastical songs. The authentic character and the low region of most of the Dorian melodies corresponds with this character.

The Dorian makes its nearest modulation into its dominant, the Æolian, or represents this key upon its own tonic in the *genus molle* (*d*, *e*, *f*, *g*, *a*, *b*♭, *c*, *d*). But it is frequently the case that other modulations precede this one.

The intimate connection with the Mixolydian, with which the Dorian has the subdominant chord and the two characteristic tones (*f* and *b*) in common, prompts it to modulate into the Mixolydian. With the Mixolydian it goes into the Ionian, and with the Ionian it goes to the subdominant of the latter, *F* Lydian.

Again we give here a Dorian choral which exhibits that key in its most distant and rare turns.

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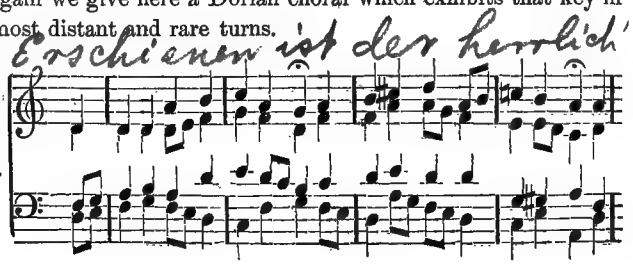
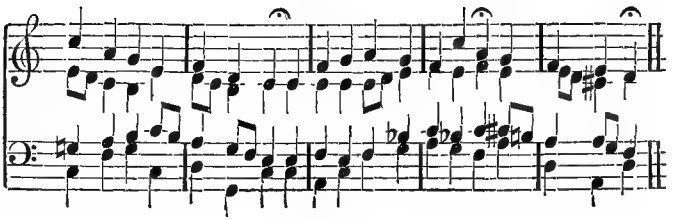




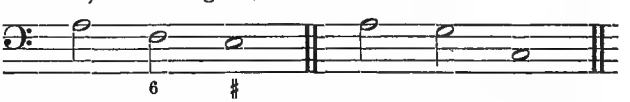
CHAPTER V.

THE ÆOLIAN KEY.

Upon the dominant of the Dorian rises the Æolian key. Its characteristic tones are *c* and *f*, the minor Third and minor Sixth. The seventh, however, not being a characteristic tone, is often changed into a major seventh, and thus makes it possible to have the triad of the dominant *major*, and the cadence of the Æolian key decisive.

This key, softer and gentler than its predecessors, does not modulate into the minor or major key of its dominant, for this would require the major triad or septime chord *b*, *d*♯, *f*♯; or *b*, *d*♯, *f*♯, *a*. But the ancient system has no *d*♯, and *f* being in the Æolian an essential tone, *f*♯ is not permitted. Nor can the Æolian go to *D* Dorian, for this would require the tone *c*♯, and *c*♮ is another essential tone.

The Æolian, instead of making use of these striking modulations, is satisfied with half cadences upon its dominant (without modulation), or turns to the Phrygian (which can hardly be called a modulation) and through that into the Ionian.

468. 

When we take into consideration, now, that the Æolian melodies are invariably plagalic, we see that everything combines to give this key a quiet, gentle, suffering, passive character, the sadness of which is only relieved by the frequent half-cadences upon the dominant. Here is an Æolian melody, which in keeping with its inclination merely passingly touches upon the Ionian.

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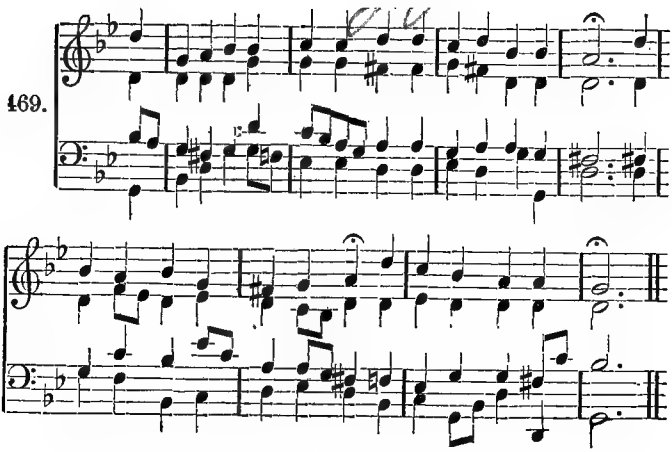

CHAPTER VI.

THE PHRYGIAN KEY.

THIS is the last of the ecclesiastical keys, and with its minor Third and minor Sixth, it distinguishes itself from all other keys by its minor Second. The latter, *f*, is therefore its characteristic tone and cannot be changed. This, however, naturally conditions the minor seventh, *d*, even apart from the fact that the ancients had no major seventh (*d*♯) from *e*. For it is characteristic of all diatonic scales, and consequently of all ecclesiastical scales, that two half steps never succeed each other. If therefore, we were to give to the Phrygian scale a *d*♯,—

e, f, g, a, b, c d♯, *e, f,* &c.

two half steps would appear in succession, and the scale, for the time, would be chromatic.

From this follows then, that the Phrygian key has no cadence which we should consider perfect; nor, in fact, can it form any cadence with tones belonging to it, for this would require the tones *b*, *d*♯, *f*♯. Thus it is entirely dependent upon the Æolian, from which it originated, and can close in no other way but upon the dominant of the same, *e*, *g*♯, *b*,—*i. e.* with the use of a foreign tone; the half cadence of the Æolian (from *A* to *E*) serves in this instance as full cadence.

We perceive here in two minor tones, again, the same reversion of the order of modulation which we formerly noticed in two major tones, the Ionian and the Mixolydian; only that the Phrygian cadence is still less independent than the Mixolydian, because in its very final chord it requires a foreign tone.

This led to the strengthening of its cadence. It was effected either by introducing in this preparatory harmony the characteristic tones, *d* and *f*,—or in addition to them the minor third of the tonic, *g*. Thus have we two Phrygian cadences:

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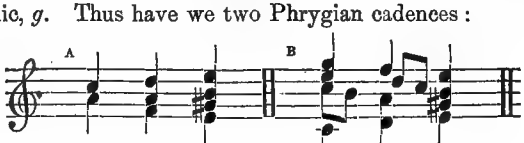

which are peculiar to this key, but by no means as decisive and satisfactory as our own cadences.

In consequence of the relation between the Phrygian and the Æolian keys the former likes the modulation in the latter, as well as the latter inclines towards the former.

Weak and helpless as the Phrygian stands there, it is really astonishing that in connection with the Ionian, which can be placed under it without hesitation,

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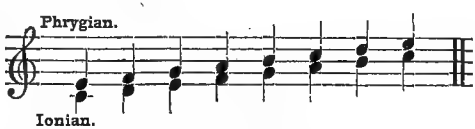

we should obtain so significant a result.

We see here a close intimate connection with the Ionian, the firmest and clearest major tone, and through it we are led at once to the Hypo-Ionian *G*. The dependant nature of the Phrygian, and its relation to an almost opposite major key, causes that its melodies often begin in tones of one of these related keys, so that it is almost impossible to know at once in which key the melody is written. Here

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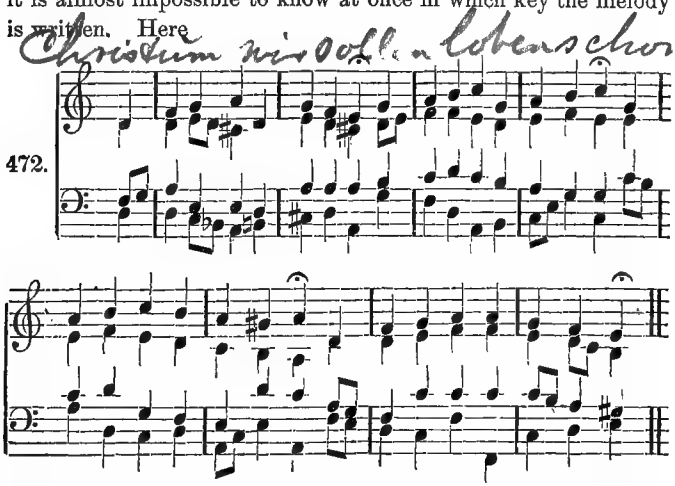


the first strophe points distinctly to the Dorian key; but the next strophe having a modulation to the Ionian *C*, proves that the former cannot be the reigning key. Only towards the end we recognize the Phrygian distinctly.

CHAPTER VII.

THE LYDIAN KEY.

We have reserved the analyzation of this key for the last. One reason for this rather irregular proceeding is, that even in the ancient system, this key has never been able to acquire an independent and rich application, and that, since the reformation, it has vanished entirely. Only in Bohemian collections do we find Lydian melodies at all, and in others the Lydian appears merely passingly in other keys, particularly in Dorian melodies.

Its characteristic is *b*, the superfluous fourth of the tonic. This one tone only, distinguishes it from the Ionian and from all the other keys; *b*, therefore, must not be altered as long as the key is intended to be Lydian. The fact of this tone's making a dominant chord impossible (*c-e-g-b♭*) would not have mattered much; for most of the cadences were prepared, not by the dominant chord, but by the triad of the dominant. Nor would it have made much difference that the superfluous fourth (*f—b*) is an unmelodious proportion; for it was easy enough to avoid this step wherever it disagreed with the melody. But in other respects this tone *b*,—the only characteristic of the key,—was the cause of the decline of this key.

In the first place the Lydian scales resembled another much more apt and useful scale (the Ionian in the *genus molle*:

f, *g*, *a*, *b♭*, *c*, *d*, *e*, *f*,)

to such a degree that it could not well escape being mixed up with it. In the second place the Lydian, in consequence of this very *b*, lacked the tonic harmony of the subdominant, and consequently could not modulate there, and was thus crippled on one side. And, thirdly, there was nothing to indemnify us for this loss; for this *b* could only lead to a modulation into the dominant—a modulation at once characteristic of nothing and the most commonplace. Every single key, except the Phrygian, had it, and without demanding a sacrifice. These are the causes of the

Lydian's never obtaining any extensive efficacy, and the reasons for our separating it from the other ecclesiastical keys.

The deep meaning of the ancient system could not be denied, and in many instances we had to accord to it more subtle distinctions and better characteristics than our own. But it would be a misunderstanding and an unartistic roaming, if we were to endeavor, in our labors, to return to the rule of the ancient system.

Every form of expression which the ancient system offers to us, we have in our own system, with the additional advantage that while we can make a free use of them, the ancients were restricted by regulations and rules.

These, for the standard of modern art, are no longer necessary; nay, such oppression would be insupportable to the tone-artist; he wants *liberty*. And in the same degree as this liberty was achieved, the directions which the ancient system gave for certain objects had necessarily to become inefficient.

Third Part.

*The Secular National Song.**

We need hardly mention that by "national songs" we mean those melodies which have really lived among the people; not those which more strictly, should be called patriotic songs, nor do we speak of those which one composer or another has invented in the manner of the people. Such manufactured national songs may have artistical merit (perhaps more than an actual national song), but they have not lived among the people, they have not become its property, they have not been attuned to the people's sense or voices! Only where that has been done—where the song has ceased to be the work of an individual, *a composition*, where it has become the property, the organic word, the voice of the people—only there we see the national song before us. And as such it is the most vivid characteristic of a nation, one of the most invaluable vibrations, in which every nation unconsciously exhibits the enigma of its existence and of its sensations.

This is the deep meaning of the national song, and by it it becomes deeply significant to the musician, who is probably the most capable of taking in and comprehending the simple melody. Whatever the real national song teaches him of his art is true and genuine; perhaps not for general purposes, but always in the sense of the nation from which it originates. But for this very reason it must not be judged by general principles, but in the sense of its parents.

We have always avoided the abstract application of made rules; if a formation does not correspond to general rules, we do not pronounce it wrong for that, but we search for the particular reasons of the deviation. The people who invented them have not *known* those rules, they have only unconsciously carried them within them. But present above all and nearest to their hearts was

* This word does not exactly express the meaning of the author, but as the translator could not find a better one, and as the true meaning of it will become apparent to the reader in the course of his studies, the translator has thought it best to retain this word.

the feeling of the moment, of the conditions under which the song became their property. Here must we look for the nearest and truest reasons for the melody of the song, and the deviation from general law.

Thus much of the interest which the national songs have for us. They are so important and so instructive that no musician should neglect to make himself familiar with them; not to imitate them, (that would be vain) nor to employ them in his own works, (that would be little) but to enter more deeply into the soul of art.

This occupation can be limited, as can every other work, to the mere performing, or meditating upon the form and the contents of the song, or it can consist of an independent treatment, *i. e*, invention of an accompaniment, or perhaps the representation of a national song as an independent composition (without words, for instance upon the Piano, or by a combination of other instruments). For the national song, as such, is sung by the people, sometimes unaccompanied and monophonic, sometimes the singers construct, from it by ear, and without regard to rule or principle, a duophonic, or triphonic phrase; often it is accompanied by a peculiarly national instrument.

If the musician, now, has to invent an accompaniment, he can do so, either in the style of the people, in which case his accompaniment will be subordinate; or he can accomplish a higher object, *i. e.*, by means of his accompaniment, and by its manner, he can increase the expression of the song, and thus elevate the work itself, and the hearer, into a higher sphere. In the first case the song remains in its natural sphere, expressive of a popular national word or sentiment. In the other case it becomes an independent work of art and can no longer be considered as a mere national song. To the latter class belongs the "collection of Scotch songs," by Beethoven. "A cyclus of songs to a distant friend," by the same author, might also be included here; likewise the arrangement by Liszt of Schubert's songs.

We shall begin with the most simple, and make it a rule to consider the Pianoforte as accompaning instrument.

CHAPTER I.

GENERAL CONCEPTION OF THE MELODY.

THE first task in the treatment of a national song is the designation of its key; for it can easily be imagined that among the people a song is sung in one key or another, just as it suits the singer.

1.—CONSIDERATION OF VOICE-REGION.

In this selection we must think *above all* of a proper position of tones for the voice. The national song is intended to be sung by many, and must not exceed the ordinary compass of voices. Though it is impossible to give the exact points to which the compass might extend, as one nation sings higher or lower than another, it will still be well to confine ourselves to the tenth: *d—f:* a tone-chain which lies convenient for high voices and is at least in reach of the lower ones.

2.—CHARACTER OF KEYS.

The next important point is the character of the key which we select. Every musician knows, or ought to know, that every key, apart from height or depth, and apart from the peculiar character of different instruments, has a character of its own, now warm, now cool, now sad and gentle, now clear and firm, which character is transmitted to the listener. If we have now at all perceived this difference of character, it is but natural that we should select, if possible, that key which corresponds best with the character of the song.

CHAPTER II.

PLAN OF THE HARMONY.

The actual work of the composer begins but now, with the selection of the harmony and the modulation. Though we shall be guided by the same principles which assisted us in our former labors, we shall, in two respects, go farther than in the choral.

Firstly, the national songs in general differ more from each other than the chorals, for in the one we see a representation of all the various conditions of humanity in all their variety; the various sensations are represented in the most peculiar, finest and sharpest features, while in the choral, everything is subordinate to the general form and character of devotion.

Secondly, in the choral, we have in addition to the uniformity of rhythm a uniform distribution of harmony,—generally a chord for each measural part or syllable,—and in order to avoid under those circumstances monotony and weakness, we have made our harmonies energetic, and our voices as melodious as possible. But this is altogether different in our secular songs. The variety of their contents and their predominating mood has given us a variety of rhythm, and has characterized each melody distinctly. We can, therefore, no longer speak of a uniform or impartial distribution of chords. The harmony has no longer the obligation to indemnify us by variety and vigor for the monotony of the rhythm, it intends only to support the melody of the song, and the accompanying voices become subordinate to the melody.

In the treatment of such melodies we must decide therefore, above all, upon

1.—*The Measure or the Quantity of the Harmony.*

But according to which law?—According to one already known to us.

Already in the first chapter of the eighth part, we have learned to consider the chords as so many spaces in which the various voices

move about. In going from one chord to another, therefore, the voices merely move from one space into another.

In the same manner we have considered the various keys through which we pass in the course of a composition as so many spaces,—but larger and more important than the former.

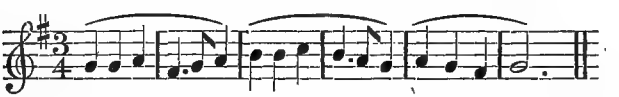
It is clear, therefore, that we consider every step into another space as an important moment of the whole, which separates the contents of one space more or less distinctly from that of another. Consequently

> we must keep together as much as possible, in one harmonic or modulatonic space, those tones of the melody which belong together.

The rhythmic-melodic construction of a song decides generally what tones belong together.

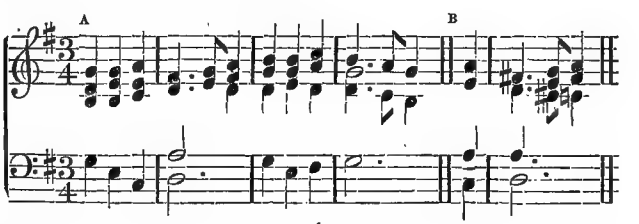
To begin then with our labor, let us take the melody of the well-known, "*God save the Queen:*"

473.



The whole formation tells us at once that the melody consists of three sections of two measures each. In order to represent the progression of this melody in the most clear and simple manner, since it would be unnatural to force all the six tones of each section under one chord,—we will at least designate the end of each section with a harmonic point of rest. This would give us an accompaniment like the following:

474.

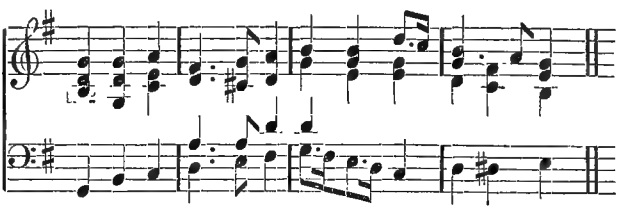


But we see already that there can be more than one division of spaces, and that the necessity of supporting the sectional points of the melody is not always alike pressing. Thus, in the above melody, we might have embraced the first two tones of the first and third measures, and the three tones of the fifth measure, in

one chord (*g*, *b*, *d*, and *d*, *f*♯, *a*, *c*); and *vice versa*, we might have given the tones of the second and fourth measures to two or three chords. The decision in such case depends upon the character of the song, or the object of our treatment; but it will always be seen, that, the more changing of chords we permit, the more weighty, and the more tones we comprehend under few chords, the more light and animated will be the song.

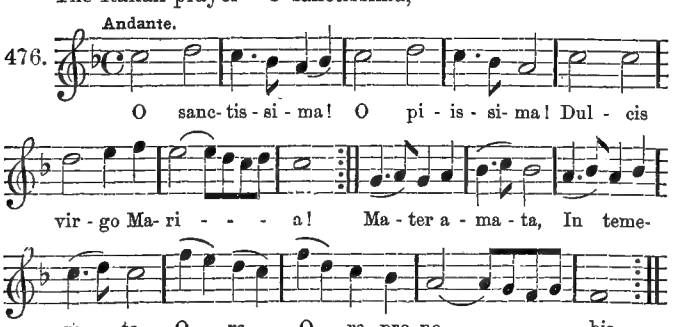
But returning to our national song we see, that however clear and simple the above treatment, it by no means corresponds to the weight of such a song. The following would be far more suitable:

475.



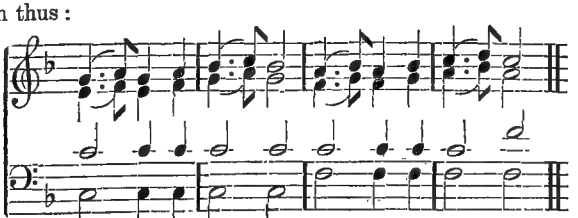
The Italian prayer "O sanctissima,"

476.



should be treated in like manner. The second and fourth measures had best remain on one chord. The second part would perhaps begin thus:

477.



2.—*Number of Accompanying Voices.**

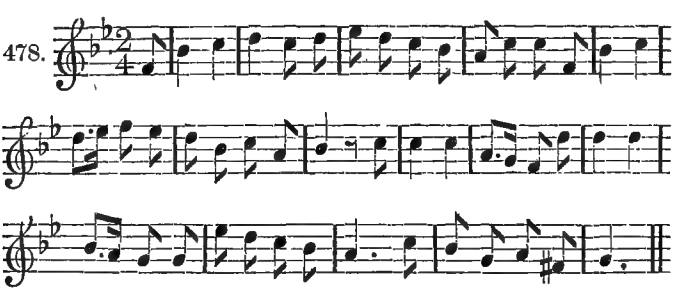
Next to the chords we must decide upon the number of voices which are to accompany the song. The more tones we combine, the more full and heavy will be the mass of the accompaniment; the less voices we employ, the more mobile and light will be the whole.

The above is so clear that it will be comparatively easy to judge how many voices are requisite for one song or the other. Two voices, three, four, or five voices can be made effective if judiciously employed.

Until now we have only considered what number of voices is in general more appropriate for this or the other song; we have now to add two other considerations which were not requisite in the chorals:

1st, We shall soon perceive that in one and the same song there is sometimes a section which demands a stronger emphasis than another; sometimes in consequence of the words, sometimes on account of the musical contents of the song itself. The mere change of forte and piano is often insufficient for such purpose; even the peculiar treatment of the harmony will now and then be unable to accomplish it. But the alternate use of few and many voices will often produce the desired effect. Thus the following song:

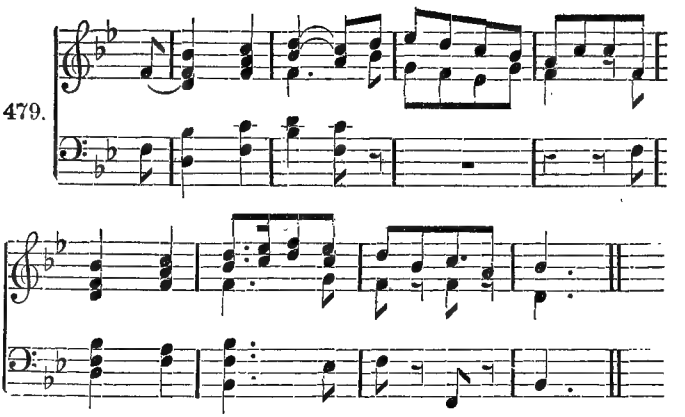
478.



might be treated with full harmony in the longer tones, while the shorter tones might be treated more lightly, perhaps thus:

* As a matter of course we have no reference here to the number of singers, nor to the forte and piano of instruments, but merely to the number of voices constituting the harmony.

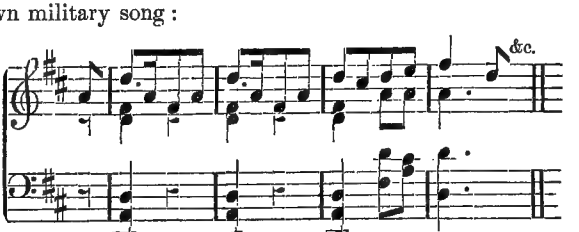
479.



But we will remember the advice given on former occasions, (Book I., first part, chapter II.) and effect this change in the number of voices only at the beginning of new rhythmical sections.—In the chorals such change would be possible, and occasionally even effective, but as a general thing it is absolutely unnecessary, as it depends above all, upon the typical character of the choral, which, altogether independent from the number of voices, demands the first and only consideration.

2nd, We shall make use—particularly on instruments incapable of forte and piano, or sustaining the tones, like the organ or pianoforte, or for the accomplishment of particular effects—of the polyphony for single moments, while otherwise we proceed with one or two voices. As illustration we give here a well-known military song:

480.



In such cases the decision depends upon the rhythmical construction or accents which the particular character of the words and melody demands. Every other direction is superfluous.

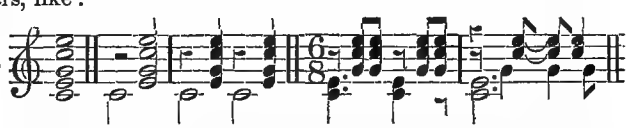
Occasionally the number of voices is reduced to make the accompaniment more practicable.

Finally we must consider

3.—*The Form of the Harmony.*

Until now we have used the chords in different positions, &c., but always so that the tones belonging to them generally entered simultaneously. But in this very simultaneous sounding of three or more tones there was an unwieldiness and awkwardness which was long a stumbling-block to us, and which we must now try to overcome.

The means for it were always at our command. We have seen already that the tones of a harmony can be introduced not merely simultaneously, but also one after the other; in the first case the harmony appears in harmonic form, in the latter case in melodic form. Between the two stand the well-known figures in which one or two voices of the harmony anticipate the others, like:

481. 

The melodic form of the harmony gives us many ingenious formations, which are called HARMONIC FIGURATIONS, and which we shall now consider.

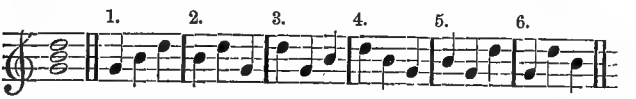
CHAPTER III.

HARMONIC FIGURATION.

Discovery of its Designs.

We know already that with the name "*harmonic figurations*" we designate the representation of the harmony in melodic form. The tones of a chord are not sounded simultaneously but one after the other. But in what succession? Here are three tones

482.

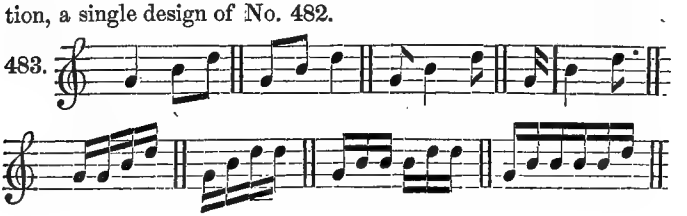


which give us already six different forms. Four tones give us twenty-four forms, independent of the variations which might be produced by change of rhythm. Even now we see that it is next to impossible to exhaust the forms of harmonic figuration, and that we merely can give an insight into this element. First of all let us glance at the designs.

1.—*Monophonic Designs.*

In No. 482 we have been made acquainted with the designs arising from three tones, without taking into consideration tone-repetition and rhythm. Of course, every other three tones, or three differently-situated tones give us six other designs, and every four tones give us twenty-four designs. The nonachord in its primitive form would give us one hundred and twenty-five designs. If we add to this the rhythmical variety and tone-repetition, a single design of No. 482.

483.

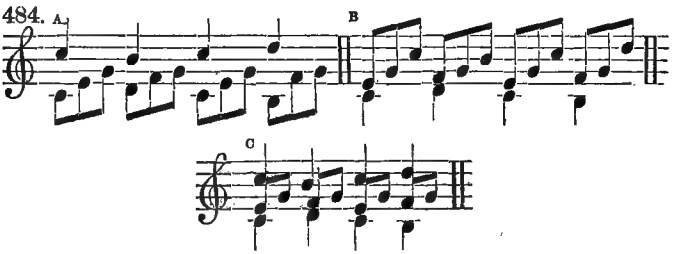


gives us endless numbers of other designs. In short this element is absolutely inexhaustible.

2.—*Duophonic and Polyphonic Designs.*

In the above we have resolved a whole chord in melodic form. But we can retain a part of it, and figurate the other; thus we have here

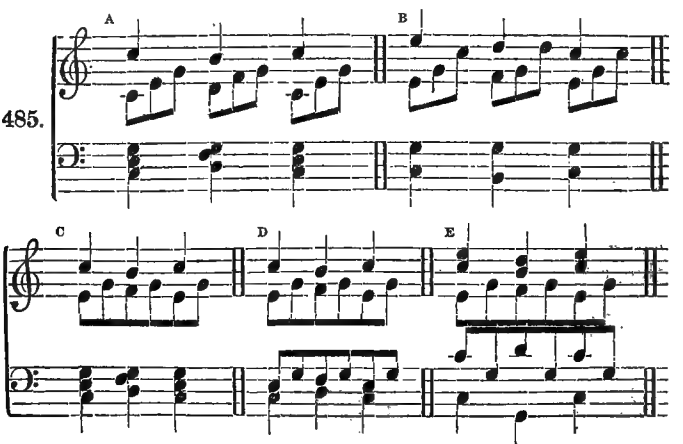
484.



figurated four chords in such manner, that at A we retained the upper voice, at B the lower voice, and at C the upper and lower voices, while the middle voice is figurated. In the former cases we have made from a triphonic or tetraphonic chord a monophonic succession; in this case we make a tetraphonic phrase duophonic or triphonic; but in the figural voice there are contained three or two harmonic voices.

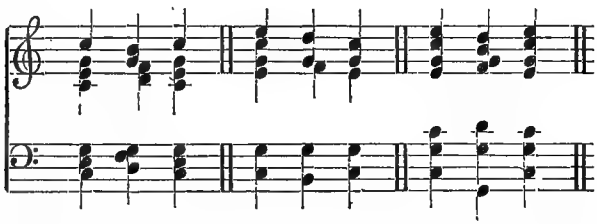
But such duophonic or triphonic phrases can again be made tetraphonic or polyphonic by the addition of new voices:

485.



It is clear, however, from the above, that such phrases, if reduced to the harmonic form, are not triphonic or tetraphonic, but pentaphonic, hexaphonic. &c., and in reality present this appearance:

486.



We leave the student to practice such figuration. We have here only seized the nearest. It will not be difficult to find more.

CHAPTER IV.

EXECUTION OF THE HARMONIC FIGURATION.

It will require but few observations to guide us merely in the execution of the harmonic figuration. They fall into two halves, just as we consider them from a harmonic or melodic point of view.

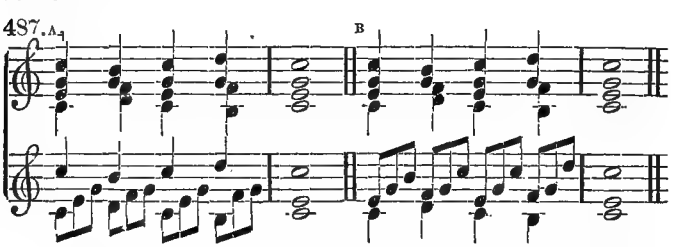
A.—THE HARMONIC POINT OF VIEW.

The harmonic figuration is in reality nothing but an actual harmony, but represented partly or entirely in melodic form. Consequently it has to submit to all those rules which have guided us in our harmony in general. If, therefore, we start from a previously fixed harmony, as in No. 482, or imagine at least such a harmony as in Nos. 484 and 487, we are involuntarily led to a proper observance of those rules. This will give rise, however, to some points worth mentioning.

1.—*Retarded Resolution.*

Let us reconsider the figurations of No. 484 and their harmonic basis.

487. A B

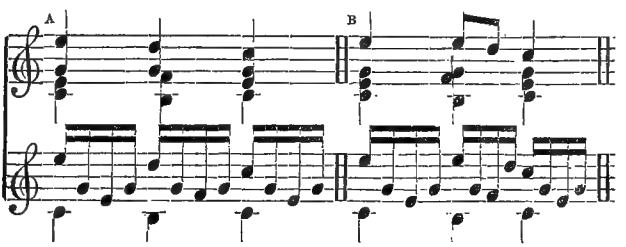


In the simple harmony the septime chords are properly resolved; *b* goes to *c*, *f* descends to *e*. In the figuration, however, at A, the seventh goes not to *e*, but ascends to *g*. It is only afterwards that *c* follows in the same voice, and finally *e*. There is a similar case at B. Are these tones treated wrongly? No;

the figural voice contains three harmonic voices, the tones of which do not enter simultaneously, but one after the other. This is called a "retarded resolution."

The same takes place if there are suspensions in the harmony, as in the following:

488.

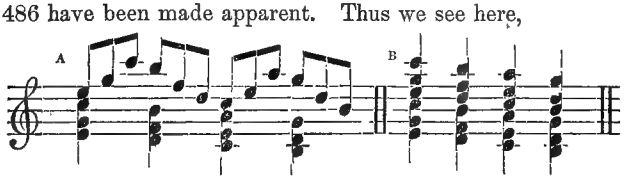


It is undeniable that the immediate resolution gives the quickest satisfaction, and is therefore the mildest formation. But the retarded resolution can exercise by its very retarding of one or more tones a peculiar charm, and is absolutely indispensable, in many cases, to the consistent execution of a figural design.

2.—*Octave and Quint-Succession.*

The attentive reader will already have noticed that in No. 485, at A, C, D, and E, there have occurred octave-successions which in No. 486 have been made apparent. Thus we see here,

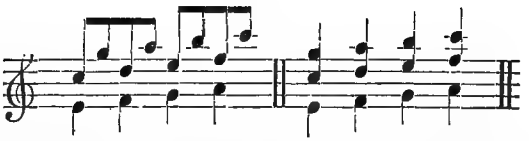
489.



at A, octave- and quint-successions which appear at B uncovered. Are such successions wrong?

No! In harmonic respect they are by no means as distinct as those of our former harmonic forms; for the figural voice hides and covers them with melodic bye-tones in such a manner, and is in itself such a mobile and flowing melody that the suspicious successions are only the consequences of the doubling of all the voices. But even if an actual faulty succession forms the basis of a figurated phrase; for instance, here:

490.

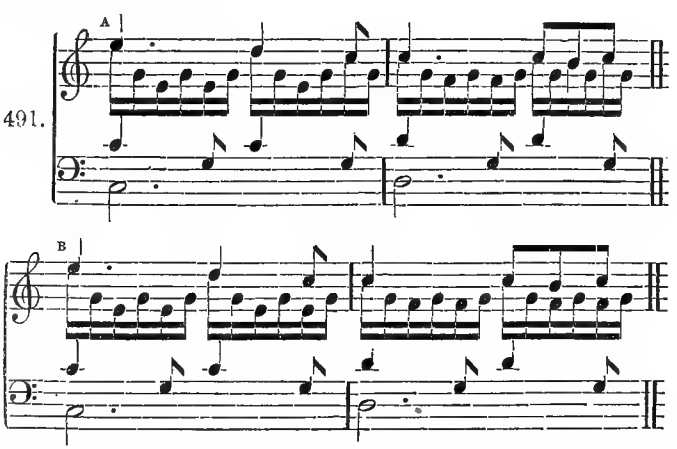


the melodic form and the intermediate steps (here a sixth between every two fifths) would mitigate the bad effects of such successions considerably.

3.—*Passing-Tones.*

Though the passing-tones do not belong to the harmony, they enter simultaneously with it, and we have often considered them as actual tones of the harmony. Therefore it is evident that they can be introduced into the harmonic figuration as if they were essential tones of the harmony. This has been done in the following little phrase:

491.



The *d* in the first measure is a passing-tone; the *c* of the second measure is first a suspension and becomes afterwards a passing-tone to the expected *d*. The same takes place in the third and fourth measures.

B.—THE MELODIC POINT OF VIEW.

Each figural voice represents, above all, a melody, and as far as its contents and its relations to the other voices permit, it

must follow the laws of melody. Of these laws there are two in particular which demand mention.

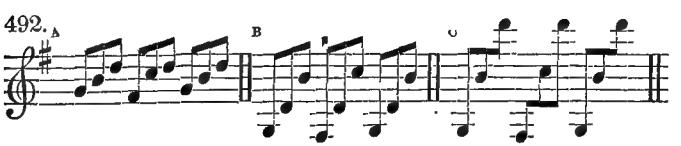
1.—*Consistency of Execution.*

We have always endeavored to retain the designs and directions once seized, and we have not passed on to others without good reasons—we will not depart from it now. If we have once seized a design, we must let it work to the best of its powers. We shall not depart from it without good reason, and we shall perhaps occasionally return to it. An unnecessary, aimless changing of design would only cause confusion and restlessness.

2.—*Firm Connection.*

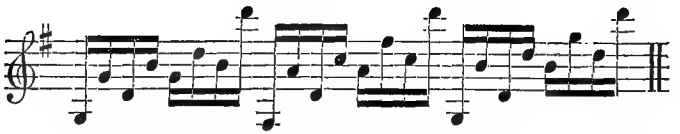
Each measure is a progression closed in itself from tone to tone, in which the relation of each tone to the following is expressed. The closer this relation of tones is, the more apparent does the relation become; therefore have tones which succeed each other diatonically or chromatically, or which belong to the same harmony, the closest relation to each other.

Therefore, in harmonic figuration, the melodic connection will be the stronger, the closer the tones of a chord lie to each other. Here, for instance,

492. 

the figure A will be the most firmly, the figure C the least firmly connected. The figure B stands between the two. It is more expansive than A, and less vague than C. These two merits might easily be combined by intermediate tones, as, for instance:

493.



Thus far rests the internal connection of the figural melody upon the *power* or formation of the design. But the close union of the isolated tone-groups to a flowing figural voice is equally important. This connection takes place, either as the fundamental harmony indicates, or the last tone of the first group can be brought in diatonic connection with the first tone of the second group.

CHAPTER V.

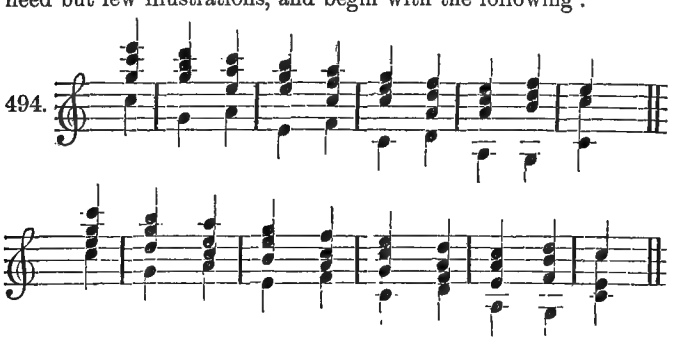
THE EXERCISE OF HARMONIC FIGURATION IN PASSAGES AND GIVEN MELODIES.

It is time now to resume the practice of our new means. Perhaps this practice is not absolutely necessary for the mere accompanying of national songs, but these exercises tend so much to the development of our musical powers, and will be of so much advantage in later exercises, that we must not omit them.

1.—*Passages reduced to Harmonic Figuration.*

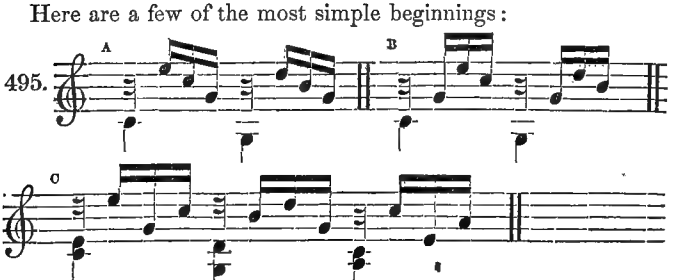
This is a comparatively easy task, because the uniformity of the passage, and the liberty to select, close, and rhythmize according to our pleasure, cannot but greatly assist us. We shall need but few illustrations, and begin with the following:

494.



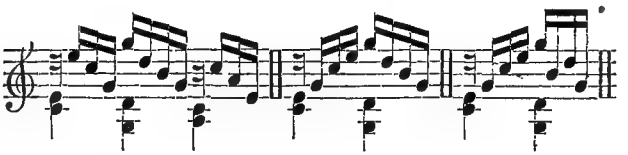
Here are a few of the most simple beginnings:

495.



At A we see the melody of the upper voice indicated by the first tones of the figural design. At B and C the melody is still visible, while here

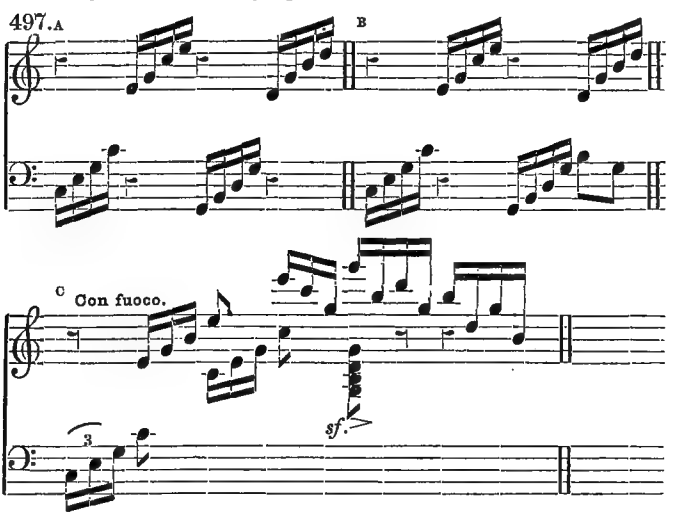
496.



it vanishes altogether.

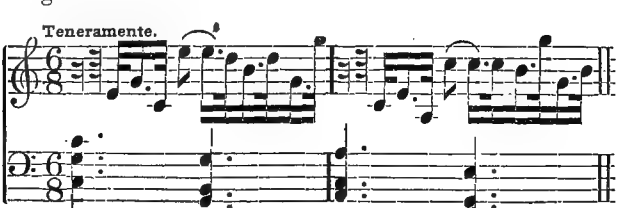
An extension of our chords would give us an enlarged arena for our designs and the carrying out of them. Here

497. A B C Con fuoco. sf.



we have given a half-measure to each chord. Here

498. Teneramente.

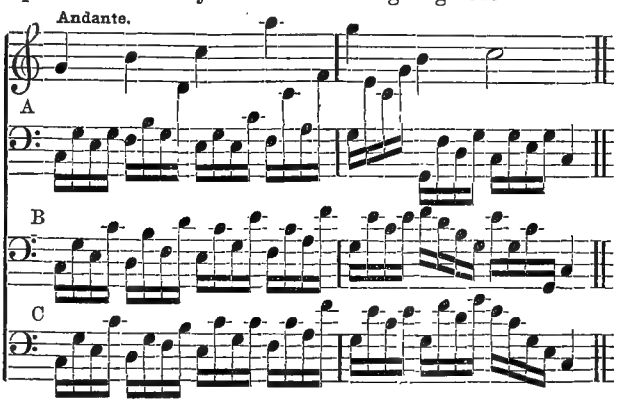


we have no longer repeated the design slavishly exact, but introduced at the same time an accidental suspension.

2.—*Accompaniment of Given Melodies.*

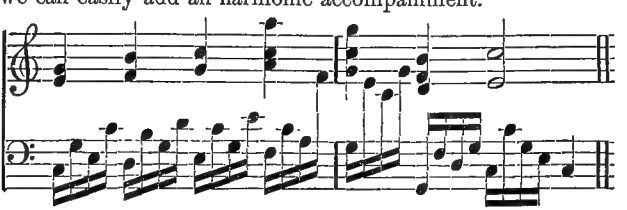
All our former melodies give us opportunities to practice on them the harmonic figuration. Only the irregular progression of these phrases makes the task somewhat difficult; we must occasionally relinquish strict adhesion to the design, in order to keep up with the melody. In the following fragment

499.



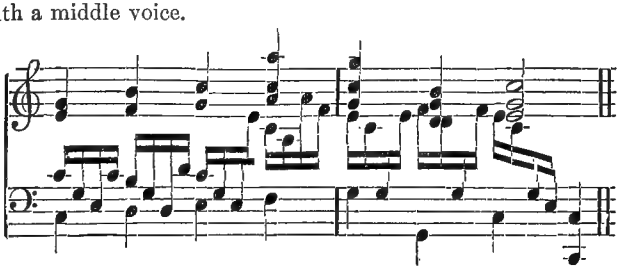
we see at A, B, and C the same accompaniment in three different designs. If this accompaniment threatens to overpower the melody we can easily add an harmonic accompaniment.

500.



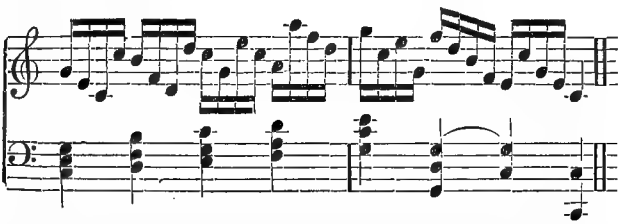
If in the above we have figurated the bass, we can now attempt it with a middle voice.

501.



The figuration of the upper voice, as might be expected, causes a greater or lesser deviation from the principal melody. But the placing of its tones on rhythmical chief-parts can soon balance this slight defect.

502.



The further practice of this figuration presents no difficulty, and we pass on at once, therefore, to the next chapter.

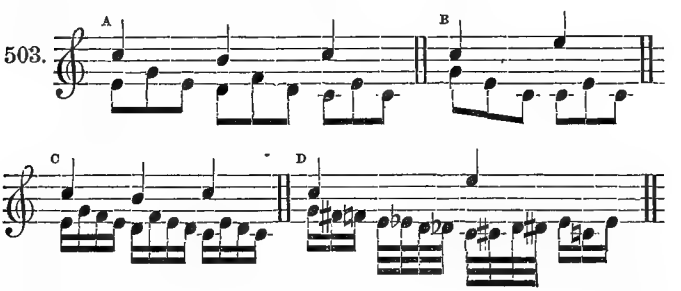
CHAPTER VI.

PASSING-TONE AND BYE-TONE.

The harmonic figuration developes before us a picture of great mobility, but it suffers from the monotony and emptiness which are always the companions of the mere harmonic element, and which have driven us already to the invention of suspensions and passing-tones (Parts Eighth and Ninth).

It lies near, therefore, to introduce these passing-tones in our harmonic figurations. Thus here,

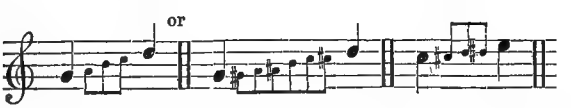
503.



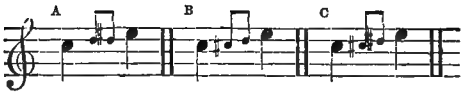
at C and D we have enriched the designs of A and B by means of diatonic and chromatic passing-tones, and have made them more connected.

But it cannot always suit us to introduce the whole series of diatonic or chromatic intermediate tones, to fill out every third or fifth:

504.

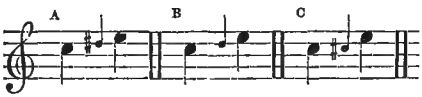


But we must remember that the very step of a third or fifth was nothing but the progression from one degree to the third or fifth, with omission of the intermediate tones. Consequently we can omit *any* or *all* the intermediate tones in the above.

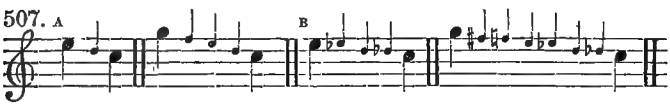
505. 

Instead of the three intermediate tones of a third we need take but two, and the only question arising then would be, which are best omitted? The object of the passing-tone is to lead us into the subsequent one, it must therefore lean towards the subsequent tone, join it closely, as it were. This is the case at A in the above. The passing-tones at B are less satisfactory, because they keep distant, as it were, from their actual goal. The passing-tones at C are in direct contradiction to the supposed key, and sound strange.

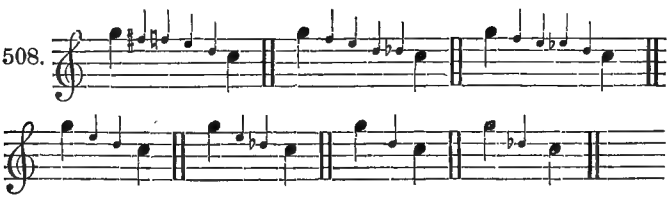
With the same right we can retain *but one* of the passing-tones, and in that case we shall select the one nearest to the subsequent tone.

506. 

The one at A or B is better than the one at C; for the *c*♯ does not lead to *e*, but to *d*. It is the same in descending. Of the intermediate tones between a tone and its third or fifth below we can select or omit at pleasure. Of the following diatonic and chromatic passing-tones,

507. 

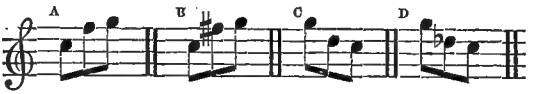
we can chose these:

508. 

But we must here add a few remarks. The pass is a flowing movement, having in its completeness a softening influence upon the melody, which, without it, must necessarily progress in wide steps.

In incomplete passes the whole influence of the pass is concentrated upon

509.



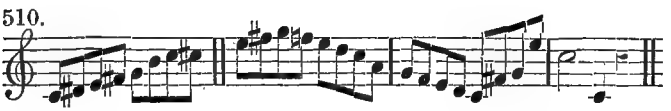
the remaining tone, which leads smoothly into the next one, while it has no connection with the preceding one.

Such isolated tones of a pass are called

HELP TONES.

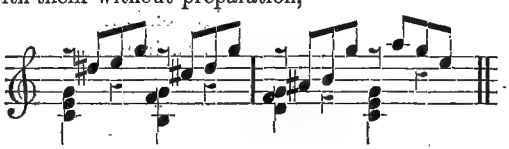
Embodying them in our harmonic figurations we gain new tone-successions, for instance:

510.



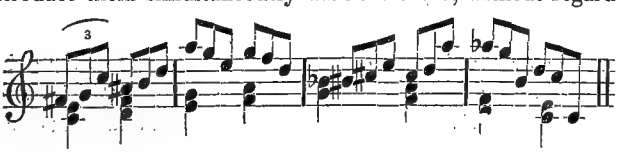
They are so simple and satisfactory an addition that we can even begin with them without preparation,

511.



or introduce them simultaneously with the chord, without regard

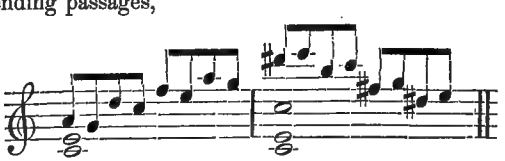
512.



to its contents, and without fearing, even, the effect of false-relations (*b*♭ against *b*♯ in the above) provided always that the help-tone leads to a chord-tone,

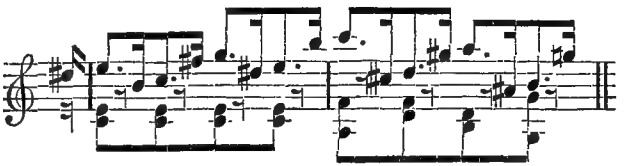
After this we need not hesitate to introduce descending help-tones in ascending passages, and *vice versa*, ascending help-tones in descending passages,

513.



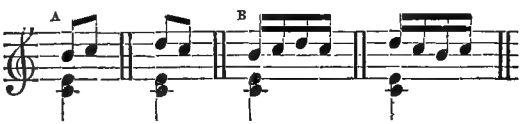
or to employ either or both in vague tone-chains of harmonic figuration.

514.



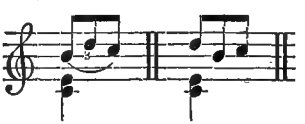
One step farther. It arises from the above that in the repetition of a harmonic tone we can give it a help-tone from above as well as below (A),

515.



and consequently we can also introduce the two in immediate succession (B). Each of the passing-tones finds its resolution in the chief-tone. Consequently we might omit the latter the first time, and unite the help-tones and let their resolution follow afterward.

516.



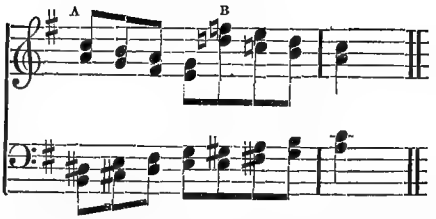
B as well as *d* are here resolved in *c;* only that the resolution of the first tone is somewhat retarded. The attentive student will here perceive at once that all our musical ornaments, such as

TRILLS,
TURNS,
DOUBLE TURNS, &c.,

are in reality nothing but an accumulation of help-tones.

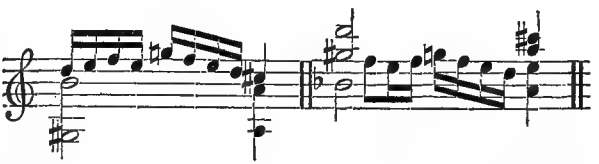
In the form of help-tones, too, passing-tones can be introduced in false relations. The introduction of them demands, however, some justification, and should not be permitted without sufficient reason. Here

517.



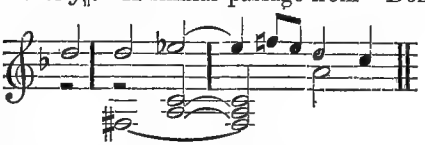
at A, we see a $c\sharp$ against a $c\natural$, at B $f\sharp$ against $f\natural$. This is done to secure a flowing progression of the different voices. For the same reason we have here

518.



taken g instead of $g\sharp$. A similar passage from "Don Giovanni"

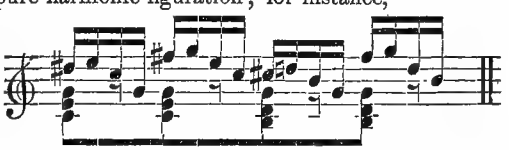
519.



can be explained in like manner.

Until now we have merely treated of the passing-tones by themselves. If we mix, now, the designs obtained from them with a pure harmonic figuration; for instance,

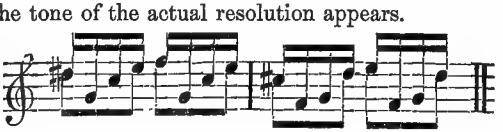
520.



we can see the resolution of the passing-tones and help-tones at once.

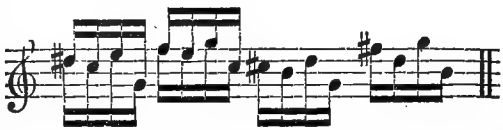
But we have already seen in No. 516, that help-tones do not resolve immediately into a harmonic tone. We shall, therefore, not hesitate to lead the help-tones first into other harmonic tones, before the tone of the actual resolution appears.

521.



Not always, however, will such mixture be good, and least so when the two elements fall *confusedly*, one into the other. This would be the case if we were to remodel 520, for instance, in this manner:

522.



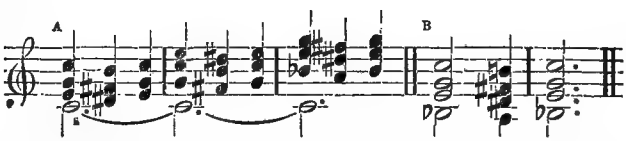
The design is clear enough in the first and last quarters; but in the second and third the impression that the two help-tones, *f*♯ and *c*♯ relate to *g* and *d*, is almost entirely effaced.

Finally we must add that these real and apparent passing-tones and help-tones can occur simultaneously in two or more voices. This can lead to harmonic formations which were not in the least intended, and which, by persons fond of technical terms, are called

Passing-chords or Transient chords.

Their treatment requires no particular directions, as their origin will indicate the rules to be observed; each help-tone—and therefore the whole passing-chord consisting of such help-tones—must return to the originally-intended main tone or chord. Thus we find here

523.



at A, within the chord *c-e-g* and *b*♭ the groups *d*♯, *f*♯, *b*, *f*♯-*b*, *d*♯, and *a*-*d*♯-*f*♯; at B we see actually all the four voices of a chord (*b*♭-*c*-*e*-*g*) proceed to help-tones which seem to form a chord of their own (*b*-*d*♯-*f*♯-*a*). The resolution of this accidental formation, however, tells us at once that the chord is not a real one, for in that case its resolution would have been far different.

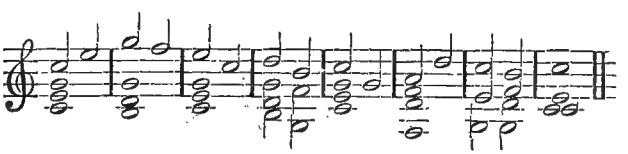
CHAPTER VII.

INTRODUCTION OF PASSES AND HELP-TONES INTO FIGURATION.

THE help-tones have stepped out, as it were, from the diatonic and chromatic passes, and thence have found their way into harmonic figuration. Their practice, therefore, must be attached to the diatonic and chromatic passes. This will have the additional advantage of reminding us of the application of the passes.

The directions needed are but few, and the following phrase may serve as a basis:

524.

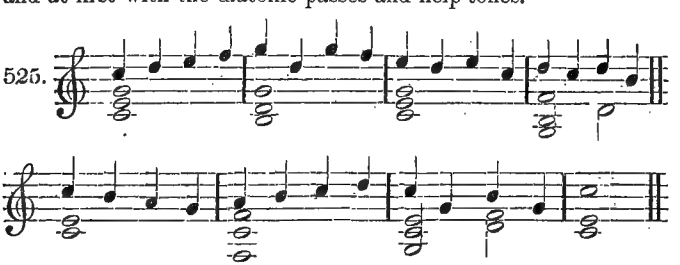


We begin our task with the

A.—FIGURATION OF THE UPPER VOICE,

and at first with the diatonic passes and help-tones.

525.

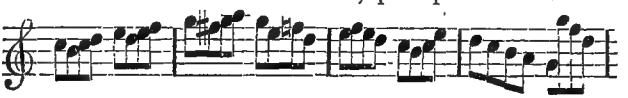


The first, fifth, and sixth measures need no explanation, as they contain nothing new. The movement in quarter notes of the first measure, induced us to continue it for another measure, and now it became absolutely necessary to continue it throughout the whole phrase. In the third measure we might have written three times *e* and then *c*, but the help-tone made it less monotonous.

Thus we have accidentally arrived at a figuration of a single tone, consisting of its repetition and a help-tone.

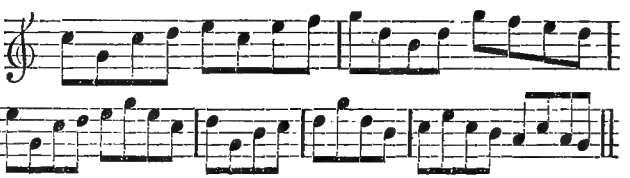
Following up the idea of figurating a single tone, we might give to No. 525 a more animated formation; perhaps like this:

526.



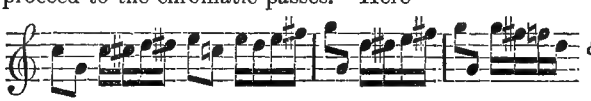
Let us turn now to the harmonic figuration; let us introduce into the upper voice tones from the fundamental harmony. The nearest would probably be this:

527.



containing harmonic bye-tones and diatonic passes. And now we will proceed to the chromatic passes. Here

528.

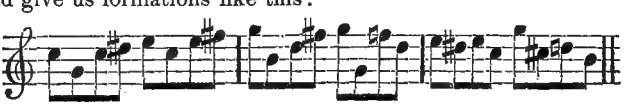


&c.

we have arrived, for the first time, at a somewhat-varied rhythmization. Merely passingly do we remember here the rich and powerful means which rhythm offers us, and which until now were laying idle.

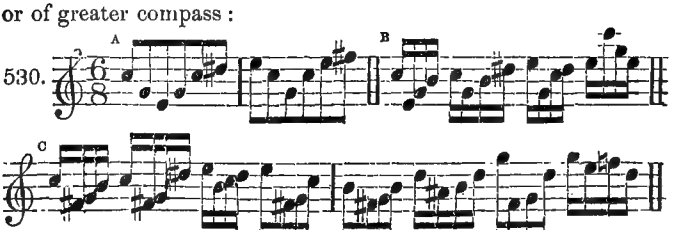
We might combine the chromatic passes of No. 520 with the harmonic bye-tones and the uniform movement of No. 527. This would give us formations like this:

529.



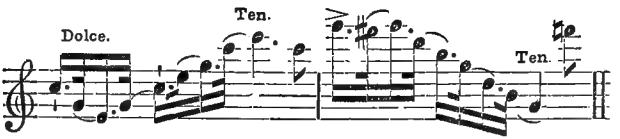
or of greater compass:

530.



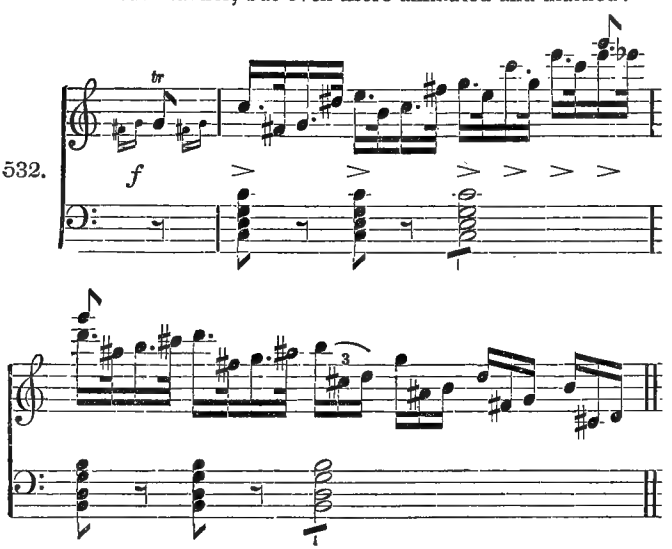
or in extended figuration:

531.



or in a similar manner, but even more animated and marked:

532.

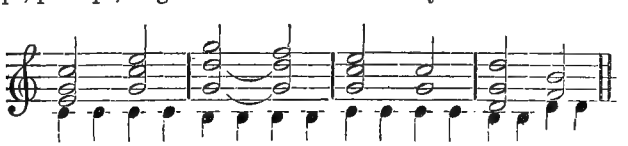


and a thousand other designs and formations.

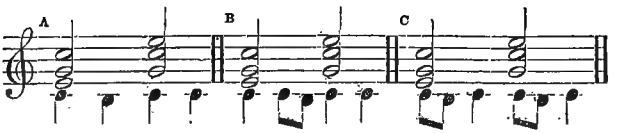
B.—FIGURATION OF THE BASS.

Returning to No. 524 we find the melodic movement of the bass so meagre, that at first we hardly know what to do with it, except, perhaps, to give it a more animated rhythmization.

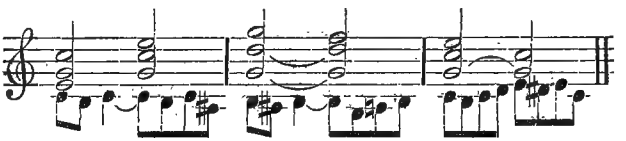
533.



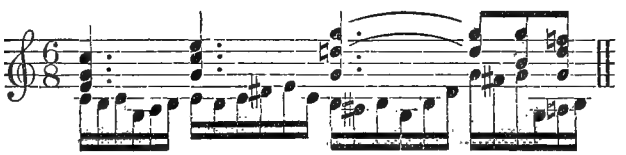
The introduction of a help-tone instead of a mere tone-repeti-

534. 

tion (A), or with it (B), upon the second part of the measure, or upon the first (C), would do away, to a great degree, with this monotony. The design C would lead us, perhaps, to the following:

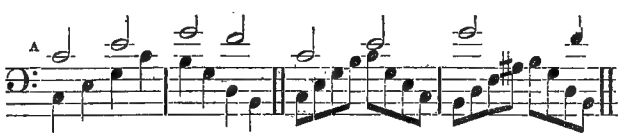
535. 

In order to show how rich a development a simple design like those in No. 534 can furnish, we merely give one here,

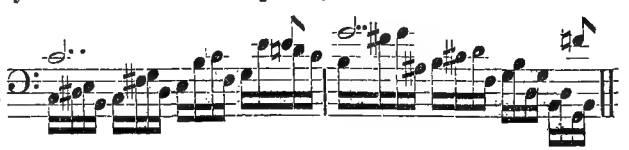
536. 

leaving it to the student to follow up this exercise.

Were we at all inclined to change the melodic basis in the bass of No. 525, the harmonic figuration would offer us the means of arriving at a richer foundation. At first we might sketch the bass in this manner:

537. 

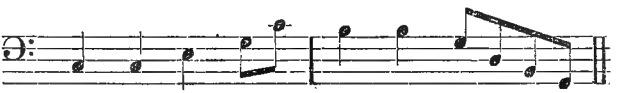
and by means of the different passes, for instance:

538. 

we would soon arrive at more interesting and extended formations. It is easily seen that the above figuration originated in

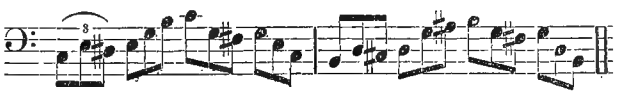
No. 537; not, however, without a change of the melodic basis, which in this case would have been:

539.



much nearer to No. 537 B, would have been a development like the following.

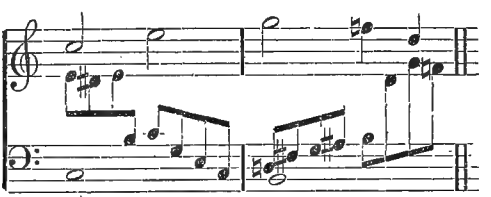
540.



C.—FIGURATION OF A MIDDLE VOICE.

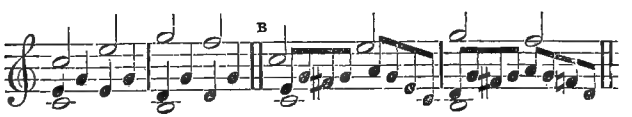
The little space at our command is here greatly in our way; and we must therefore either lay the voices farther apart, or we must combine the two middle voices into one. The former proceeding will call into existence formations like this:

541.



the latter would lead from formations like A to such as B and many others.

542.



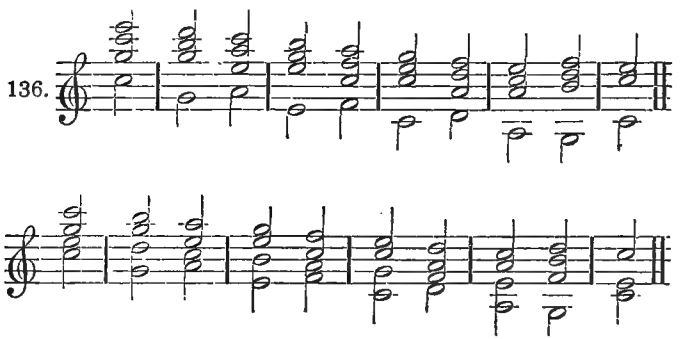
These directions will be sufficient to practice all the different forms of the pass in connection with the harmonic figuration, and stimulate the inventive faculties of the student.

Yet we would recommend to the zealous pupil a last exercise, which in his future polyphonic labors will be of much advantage to him. We have reference to

THE APPLICATION OF HARMONIC FIGURATION, IN CONNECTION WITH PASSES, HELP-TONES, AND SUSPENSIONS TO HARMONIC PASSAGES.

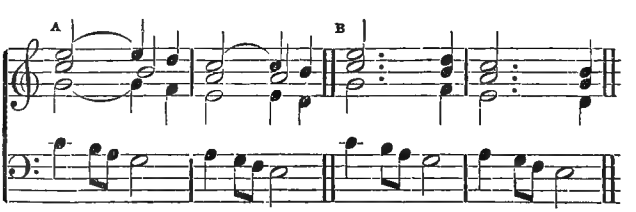
The task is an easy one, and a few illustrations will be sufficient. We return again to the passage 136. Here the bass

136.



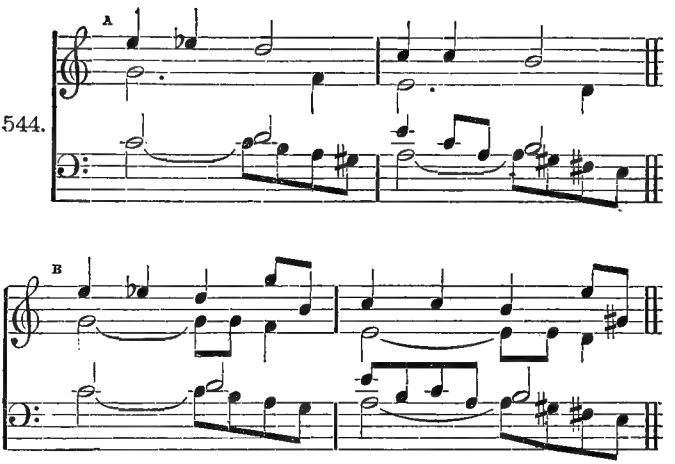
descends alternately a fourth, and the third voice, in like manner a third. The other voices proceed diatonically. Let us now fill the wider steps with diatonic passes.

543.



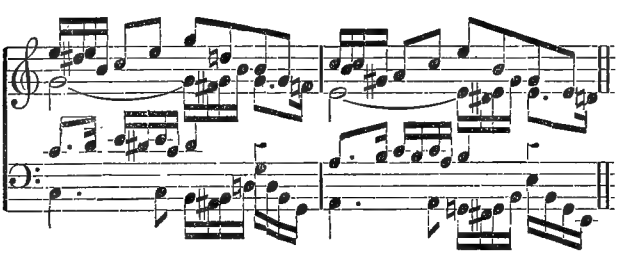
Why have we, at A, introduced suspensions in the upper voice? In order to avoid the consecutive fifths which the passes would otherwise have formed with the upper voice. At B we have suspended all three of the upper voices. Let us now attempt the introduction of passes in the upper voice; as a matter of course they can only be chromatic.

544.



As a last illustration of the rich and varied developments which the industrious student can derive from the simplest designs, we give the following:

545.



The first four notes of the treble can be considered as the principal design, which will be found in a more or less similar form, in the tenor, alto, and bass.

But though we have given here a somewhat complicated illustration, the pupil must not fail to begin with the most simple designs.

CHAPTER VIII.

APPLICATION OF THESE NEW MEANS TO ARTISTIC ACCOMPANIMENTS.

We are at last fully prepared for every kind of accompaniment which the character of our national songs might demand. We can now represent the most volatile and flowing accompaniments in endless forms, as we formerly constructed accompaniments of full and firm chords, only occasionally interspersed with harmonic by-tones &c., &c. (*vide* Nos. 475, 477, 479.) Casually we learn now, that some of the tones in No. 477, which we could not explain at the time, are nothing but help-tones. Our labor now is but trifling. We have the necessary means in hand; we have practised their application, and it only depends now upon our selecting the right means for every particular task, to judge which form of accompaniment or representation is most in keeping with the character of each song.

The great similarity of many of our present forms, and the different conceptions of which most or all of our songs are capable, makes it impossible to point to any one form as the only right one. Yet we can be guided by certain general principles which will always indicate to us the proper direction, and guard us against aberration.

1. A strictly harmonic accompaniment, like that of No. 475, produces the most firm, meaning, and heavy effect.
2. The richer the change of chords, the more interwoven those chords are, by means of suspensions, passes, &c. &c., the more conspicuous will be the character of this harmonic accompaniment, (Nos. 476 and 479.) The milder and rarer the change of chords (No. 475,) or the more these chords are separated by rests (No. 480,) the lighter will be the accompaniment.
3. In juxtaposition to the harmonic accompaniment, we have

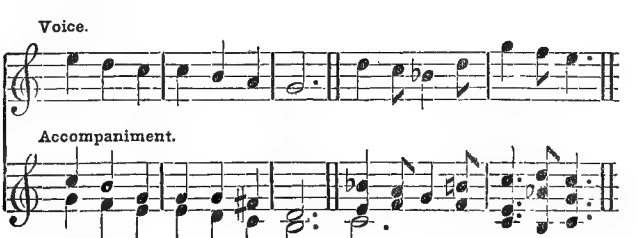
the harmonic figuration, the fundamental character of which is animation, lightness, grace, and a certain transparent connection of tones.

4. The farther apart these tones, the more extended the figures, the more rapid the movement, the more conspicuous will this fundamental character become; the more simultaneous voices share in this movement, (No. 485 D and E,) the more do we approach again to the fullness and firmness of massive motion.
5. Passing-tones or help-tones are apt to make the harmonic figuration more connected, full, melodically satiated, as it were.
6. The more firmly the melodic connection of an accompanying voice has been developed by means of passing-tones, the more independent a melody will this voice become, and the more attention will it detract from the principal melody.

After these observations we will construct our accompaniment for each song according to its contents; we will even change the form of accompaniment, if prompted by the deviating tendency of single verses or parts. But in every case we will endeavor to keep in view the general character of the song.

It is necessary, also, to ascertain whether the melody is to be sung, or to be played in connection with the accompaniment. In the former case it is not necessary to place the melody in the accompaniment; but it will be well to construct the accompaniment so that, by itself, it affords a certain satisfaction and contains at least no disagreeable passages; for instance, quart-successions to which the melody would form the sixth,

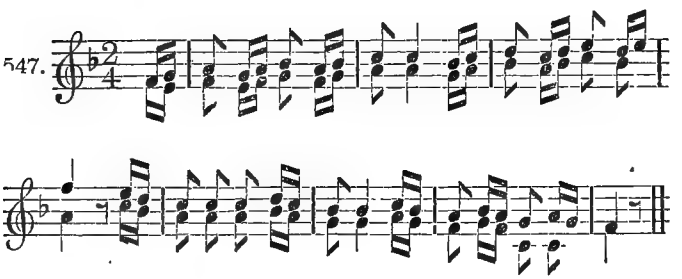
546.



irregular steps in the upper voice, &c. &c. But these considerations will be treated more fully in the chapter on the accompaniment of vocal music. Here we shall confine ourselves principally to such treatments in which melody and accompaniment are performed on one instrument—the pianoforte.

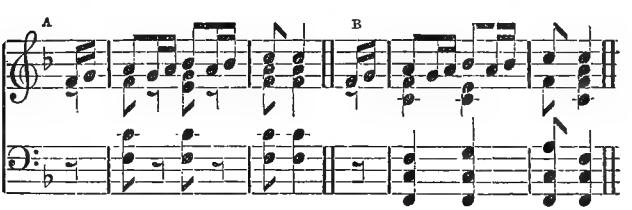
Let us begin our labors with the following song:

547.



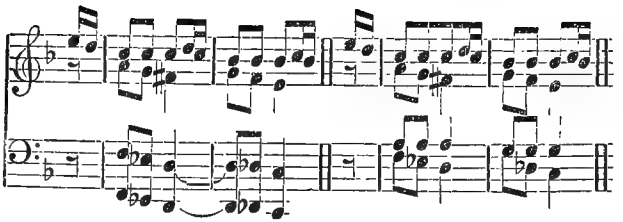
which, in its simple construction, resembles our first periodical formations. As above, it is sung duophonically by the people. This treatment is perfectly in keeping with its object and character. If it were intended to be accompanied by the pianoforte, or to be played without being sung, a few simple chords, supporting the rhythm,

548.



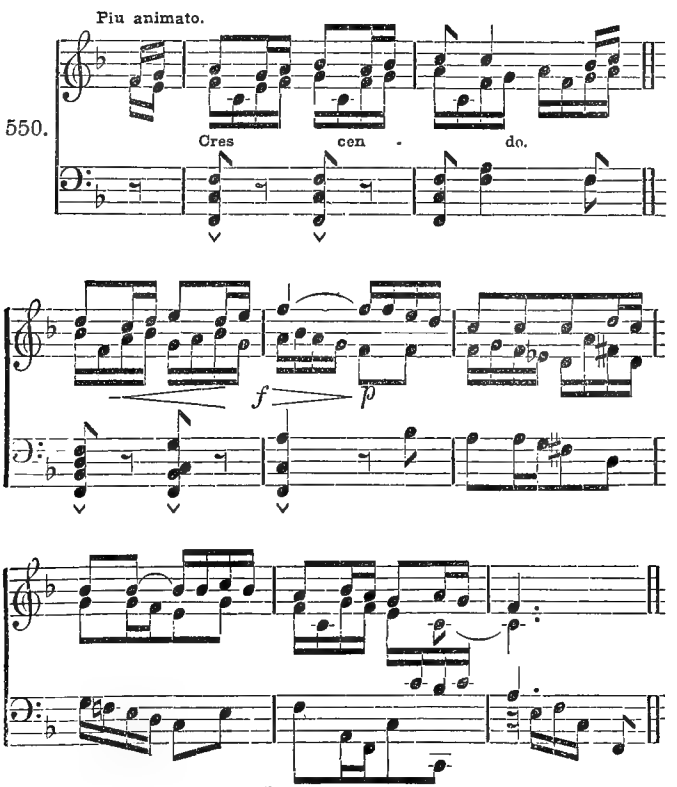
would be sufficient. The first of these accompaniments would answer to the light verses, the second to the more serious and sad final verse, and the coda might designate this latter mood more characteristically by means of a more developed harmony:

549.



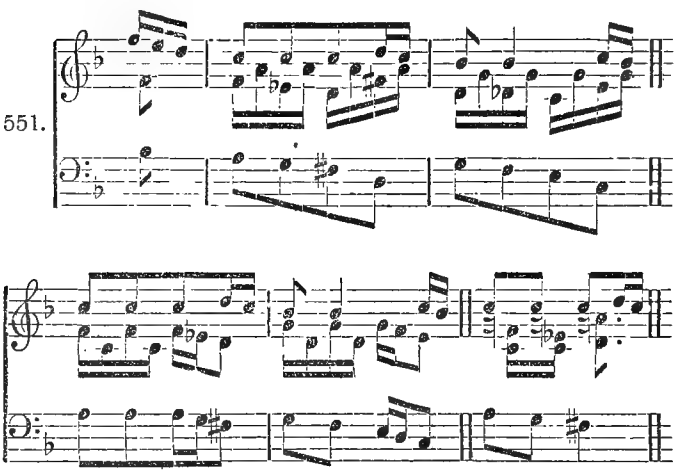
If this form of accompaniment should be deemed too simple, if we were to give an indication of the suppressed emotion of the singer, we might form a more animated middle voice. This has been done here, in the most simple manner:

550.



The design consists of the second voice of the national song, combined with the fifth of the chord. It is deserted in the close of the thesis, and is indicated again at the end of the whole. The antithesis has made itself more independent from the design, and assumes a more complicated form, which might have been different and simpler; for instance:

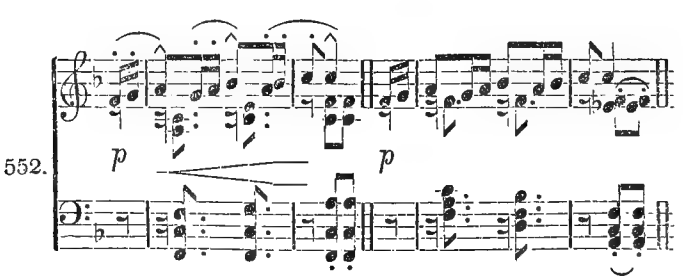
551.



but which departs altogether from the simple character of a national song.

Let us imagine one of these representations employed for the second verse, and we might give the third one a more anxious, excited character, though still resembling our first conception (No. 448;) perhaps thus:

552.



But if we were to depart still more from the character of rural simplicity, if the melody were to pass by like a mere recollection, we might surround it with accompanying reminiscences,

553.

Marc. c. espr.

Ped. piano.

pp

*

p

Marc. espr.

pp

p

Ped.

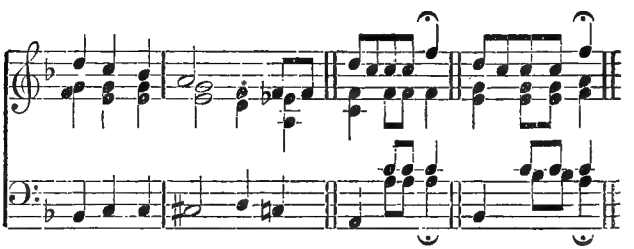
or other nearer or more distant formations. Franz Liszt has been peculiarly fortunate in the production of such forms.

554.

Massig.

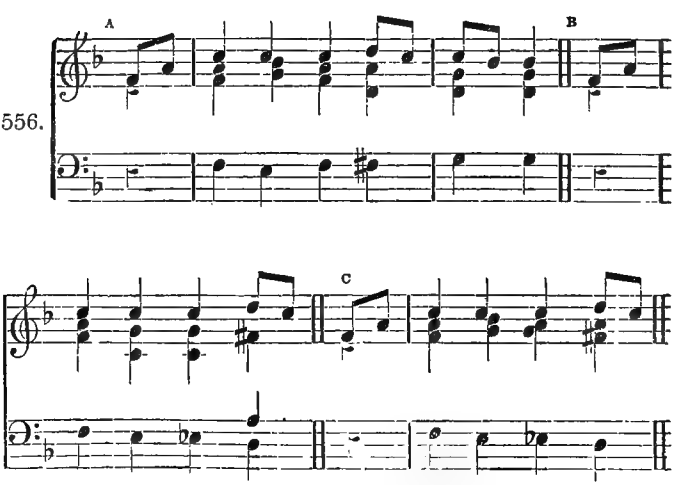
Finally, we will throw a hasty glance upon the above song. It is less simple than the former, but admits of many harmonic conceptions. We see in it two particularly conspicuous points: the pause in the third measure from the end, and the imperfect cadence of the second part, two measures previous; for the rest is merely a repetition of the same. Both points have one and the same object,—the expression of the longing for her to whom the song is addressed. We shall have to make use of interrupted and imperfect cadences, in a manner which corresponds to this gentle, restless desire; perhaps thus:

555.



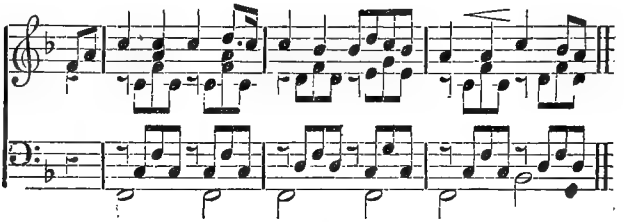
Shall we harmonize the beginning thus?

556.

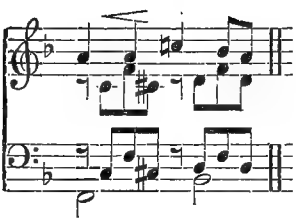


It would appear too unsteady and assuming. The latter refers particularly to the painfully anxious chromatic progression of the bass. We should prefer a full and gentle figuration of simple harmonies:

557.

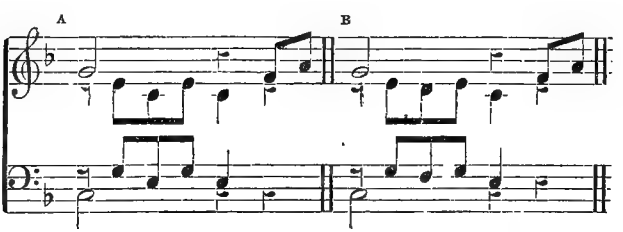


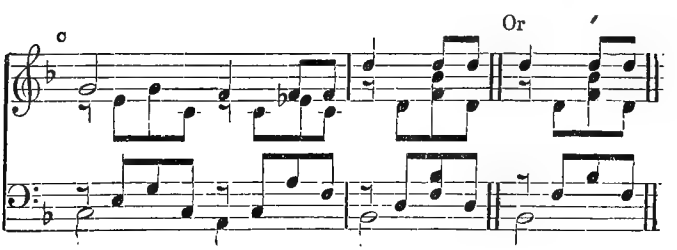
or



and with the following measure we would return the first time to the beginning (as at A or B,) and the second time we would pass over to the second part, as at C.

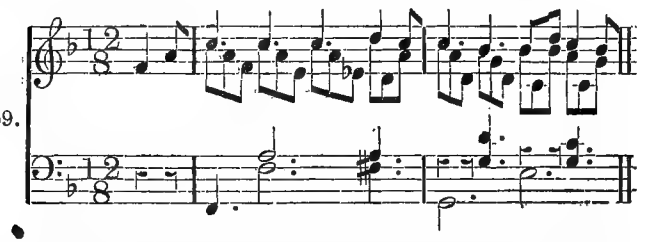
558.





Or, if we conceived this song in a more restless mood, we might form a more animated accompaniment, perhaps thus:

559.



We leave the student to practise these and other analyzations and exercises.

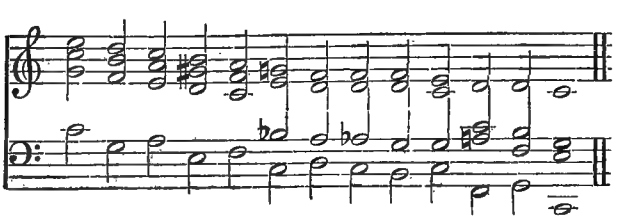
APPENDIX.

THE FIGURAL PRELUDE.

In the first chapter of the Fourth Part we have already mentioned the prelude with which a piece of music can be introduced to the singers or listeners. Our prelude at that time was extremely meagre, on account of lack of means; and though we soon after gained new chords, and were able to construct more varied harmonic passages, yet we could not overcome the monotony and dryness of our first attempts, until we arrived at the harmonic figuration, with or without the passing tones and help-tones. It is for this that we now return to the prelude, and even now we have to be limited to the most subordinate forms. Nor does this subject actually belong to this branch of musical theory. We consider it merely as an appendix, dispensable—it is true—but so easy of attainment, that we shall not hesitate to treat of it.

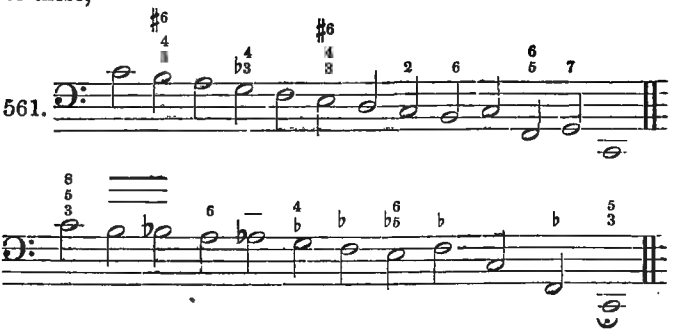
The prelude is intended to prepare us for the key of the subsequent composition, either by indicating it, or by actually sounding the essential harmonies, and in addition to these, perhaps other near related harmonies. Thus much we have learned already at p. 120. Passages like this,

560.



or these,

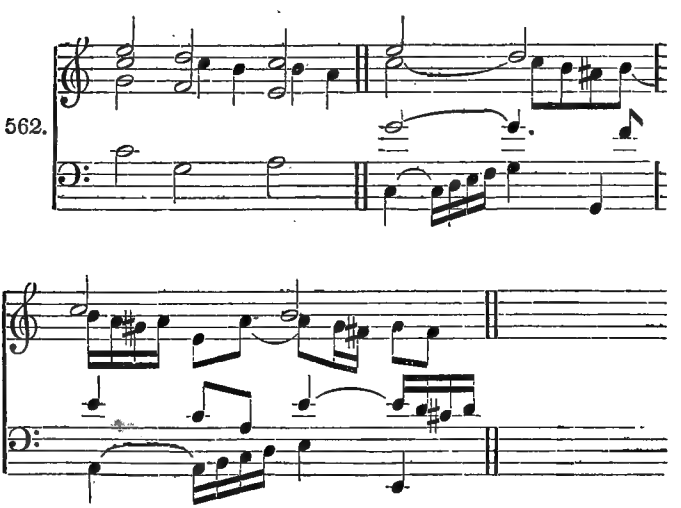
561.



are quite appropriate for purely harmonic preludes.

We have already learned to develop such passages more firmly and melodiously, by means of suspensions and passes. We might therefore give to the prelude No. 560 this—

562.



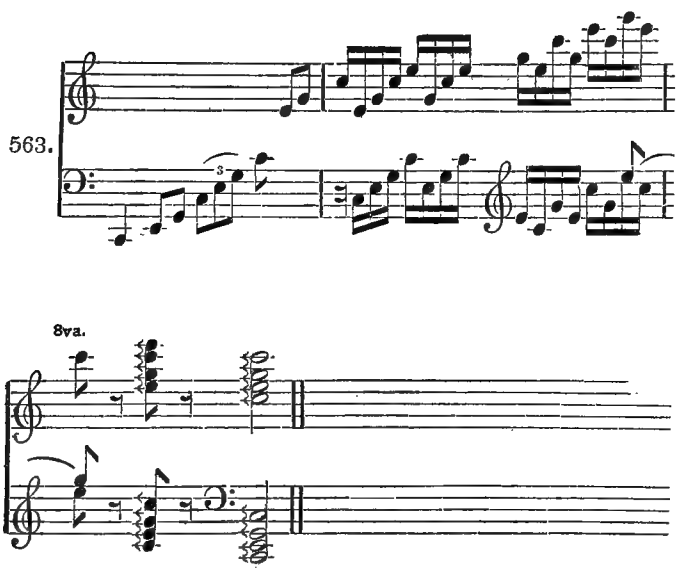
or any other form.

But such formations are less appropriate for preludes, because the presumptuous development is not in keeping with the simplicity of the task and the harmonic foundation.

Here again we discover in the figural forms the proper means They mitigate the stiffness of the chords, and with all their unassumingness give us the possibility of volatile formations, without preventing us from elevating ourselves to more energetic, flowing and melodious ones; and as they do away with the monotonous stiffness of the chords, they permit us at the time to remain longer with every single chord.

Thus, by means of harmonic figuration, we might form from one single chord a prelude,

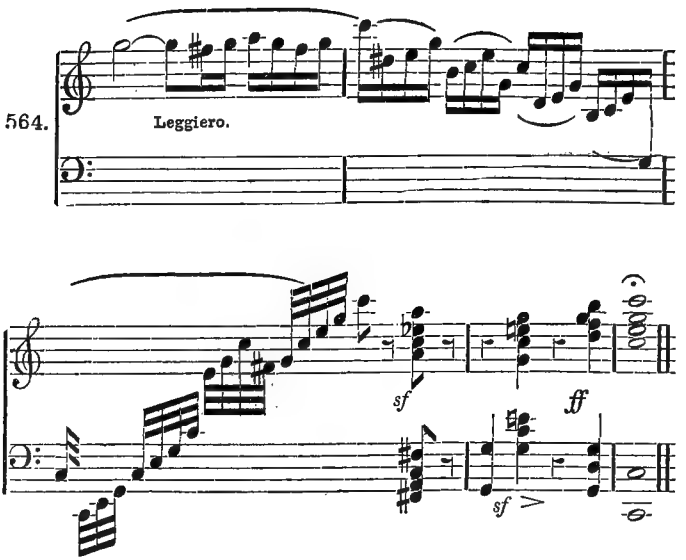
563.



which, in its mobility and variation of form, remunerates us most amply for its lack of harmonic variety.

It would be already a progress if we employed the figuration for the dominant chord, and closed with the tonic triad, or if, after any one figurated chord we introduced the harmonies essential to the designation of a key, as we have done here:

564.

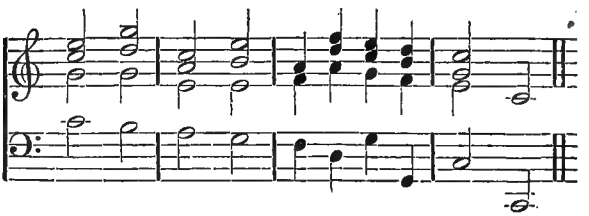


This, too, should be practised, first on paper, and then at the pianoforte.

We can obtain a richer formation, and one of a higher order, by selecting an harmonic succession, in the manner of our first preludes, and afterwards carrying it out according to a fixed figural design.

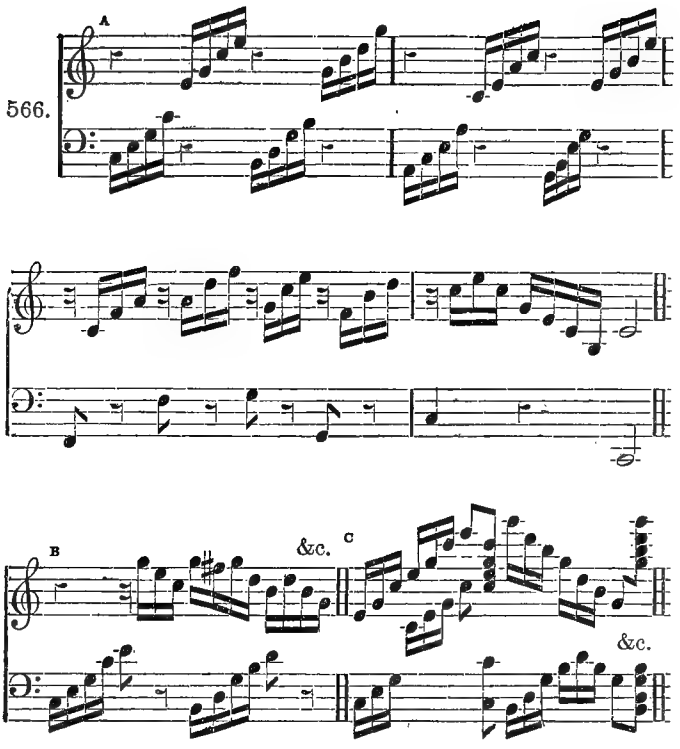
The following phrase:

565.



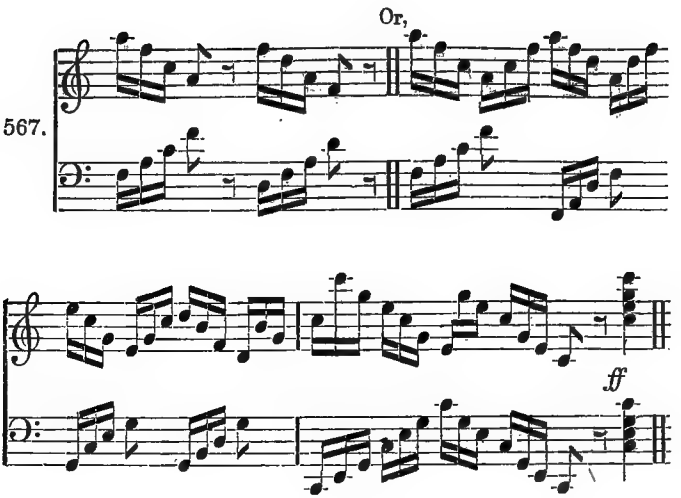
may serve as an illustration of such foundation. A simple harmonic figuration—

566.



gives it already mobility and variety, and it requires merely a steady progression, to obtain from it series and series of new formations, particularly after we have introduced passes, help-tones, change of design, and rhythmical form.

We have made but sparing use of these means; a single help-tone has been introduced in B; and in C we have employed two designs (triplets and eighth-notes.) In continuing this, however, as we have seen in A,) our designs would have to be modified or divided, because the foundation assumes a more rapid progression after the third measure. In C, too, this would be necessary: we might omit the second design, and form the first thus:



Thus much of this by no means difficult exercise. Guided by it, the student may venture beyond the limits of the phrase, and exercise his invention in free harmonic formations, either on paper, or improvising on the pianoforte.

APPENDIX AND NOTES

TO

MARX'S THEORY

OF

MUSICAL COMPOSITION.

BY E. GIRAC,
OF THE CONSERVATORY OF PARIS.

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INTRODUCTION.

My object in writing the following Appendixes has been to condense and abridge matters which, in the author, are too prolix, and mingled with secondary considerations of the subject, which oftentimes obscure the practical rules. In instruction books, precepts ought to be unfolded with as much brevity as possible; definitions be clear and comprehensive; the developments strictly confined to points immediately connected with the rules or definitions. It is quite a different thing to write for learners, or learned. The latter will, no doubt, be satisfied with philosophical views, with reasonings and arguments skillfully linked one to another; they will follow, with interest, thoughts developed with a wonderful abundance of expressions, and sometimes with brilliant figures of speech. This does very well with readers conversant with the subject. But the former will, after all, derive but little benefit from those evidences of learning, from that fecundity of thought and richness of expression paraded by the writer. The practical man laying down a code of precepts must say to the pupil, 'this you have to practise, that you have to avoid.' He must still do better, he must show the pupil how to observe this, and how to avoid that, by numerous examples subjoined to every precept. So used to do Cherubini, perhaps the greatest theorist who ever existed: so did Reicha, the most practical man who was ever seated on the professor's pulpit. So did the early German theorists, such as Fuchs, Marpurg, Albrechtberger, and the Italian padre, Martini, and many others, of whom it would be too long to give here the names. Nothing is more apt to give an idea of the soundness of judgment of Beethoven, than the conciseness with which he has developed the rules of Counterpoint and Fugue in his musical studies. The paucity of precepts contrasts wonderfully with the number of examples. In this, we think he was influenced by his master, Albrechtberger.

These few lines serve to show in what spirit the Appendixes have been written. I have given compressed and short rules, but sup-

ported and illustrated by numerous exercises, intended both to put the rules in practice, and to serve the student as models of work for himself.

Though these Appendixes have been composed to be explanatory commentaries to the large treatise of Marx, yet they form a whole in themselves, and from the treatment of the triad down to the passing-notes, where they break off, they form a compendium of the matters contained in them, in which nothing necessary to the instruction of the pupil has been omitted. They have another advantage; they offer the teacher of harmony a text-book in which the fundamental laws of harmony have been laid down, so that he will have no other task to perform than to direct and superintend the work of his pupil, being thus relieved from giving, himself, but very few directions.

But how must these Appendixes be used? In the following manner.

The student will first read attentively, and endeavor to understand thoroughly the work of Marx, from page 94 to 113. Next, he should put aside the author, and begin the Appendixes down to the chapter on the pedal-point. When reaching this part of my work, he will take the text of Marx, where the fundamental principles of the pedal are given (page 215). At the page 219, of the author, he must resort again to the Appendixes (page 128), in which the manner of framing a pedal and some other developments are given. At this part of his work he will have to finish the Appendixes. I have confined my work to the suspensions, but they are fully developed, and more completely shown in the work of Marx. If the student be aptly possessed of the matters treated in the Appendixes, he will be able to understand and practise the chapter on *passing-notes*, and the following of our author. When reading through the Appendixes for the first time, the pupil will have to neglect those that are mere observations on the text, such as App. H, App. I, and App. K. When the Appendixes have been once read through, and studied carefully, the pupil will take the text a second time, and then read the Appendixes in connection with the text in the order in which they are referred to by numbers inserted in the book of our author. These directions are particularly addressed to students left to self-instruction, or amateurs living in the country, deprived of any assistance from professional men. As to pupils enjoying oral teaching, they will use both the text and my Appendixes, as directed by their teacher.

A few words now on the exercises, especially for the benefit of students left to self-instruction.

After reading the rules and explanations, the pupil should copy the base of the exercises coming after every rule or explanation. without looking at the upper parts. Particular care must be given to the figuring of the base. This being done, he will fill up the harmony according to the figures written carefully under the base. Before commencing to fill up the harmony, he ought to read over and over again the rules on the three musical motions, and watch his work with utmost care, in order to avoid fifths and octaves either hidden or real. After it, he will compare his work with the upper parts written above the base in the Appendixes. If he discover faulty successions, or mistakes in contradiction to the figuring, he should recommence his task, until, by comparing it with the exercises, he finds no fault with his own arrangement. When studying the triads, which I consider the most difficult labor of the pupil, particular attention ought to be paid to the connection of chords; most of the faulty successions arise from breaking this connection. When the student has succeeded in writing his work correctly, (and to succeed in this, it is not necessary to arrange the parts just as they are in the Appendixes,) then he must *create* a base for himself, and fill up the harmony. In the discords, particular care is to be given to the preparation, when required; next, to the resolution.

These exercises are carefully figured. The figuring is that adopted in the Conservatory, and, generally, by the French school, of which it is necessary to give the pupil a proper notion and view.

The triad is figured thus, 5.

The diminished triad, thus, -5-.

The augmented triad, thus, ♯5 or ♮5.

When the third of a chord or triad is suddenly altered by an accidental, this accidental is placed above the figure 5, thus, ♯/5, or ♮/5, or ♭/5. showing that the third is affected by it.

The dominant triad is sometimes designated by the signature which constitutes the leading note in the minor key, thus, ♯ or ♮, according to the key. This applies only to minor keys.

The dominant seventh, whatever may be the mode, is figured, 7.

The seventh, arising from the suppression of the fundamental in the dominant seventh, is figured thus, -7-.

The diminished seventh is figured thus, -5-.

All the other sevenths, major or minor, 7.

The major dominant ninth, $\frac{9}{7}$.

The minor dominant ninth, $\frac{\flat 9}{7}$ or $\frac{\natural 9}{7}$.

The third is seldom figured, except when the dominant seventh resolves incompletely on the third of the tonic.

The perfect fourth is figured 4.

The augmented, extended, or sharp fourth, +4.

The diminished fourth, -4-.

The sixth, both major and minor, 6.

But when the sixth is suddenly altered by signatures not belonging to the principal key, the accidental or signature is prefixed to the figure, thus, ♮6 or ♭6.

The diminished sixth, -6-.

The augmented sixth is figured by prefixing the accidental which affects the sixth to the figure, thus, ♯6 or ♮6.

The second, both major and minor, 2.

The second, arising from the third inversion of the dominant seventh, in both modes, is figured thus, +2.

The augmented or extended second, thus, ♯2 or ♮2.

I give this figuring as the one used in a great school, and applied to these Appendixes; though, I confess, there is much that is arbitrary in this, and I do not disapprove of any other method of figuring which may convey an exact notion of the harmony. But the pupil who studies alone, being necessitated to submit to that of the exercises, it was incumbent upon me to make him acquainted with it. I have now given all the directions necessary, that the student may derive from these Appendixes all the advantages contemplated when they were written, and, I have no doubt, these advantages are certain, if the student be a careful observer of all the given directions.

EM. GIRAC.

New-York, July, 1854.

APPENDIX A.

TREATMENT OF THE TRIADS.

THE Triads, to be treated properly, require much skill and art. The preparation of the dissonant chords is not a difficult matter, and each of their constitutive tones is called to its proper place by the laws of their resolution.

Here the pupil is left alone, having no other guide than the connection which may exist between the chords—a connection which he must look for, and the discovery of which depends entirely upon his care. Besides, there is a difficulty which he meets with at every step, and which must be carefully guarded against; we mean the faulty successions of real or covered fifths or octaves.

On pages 101 and 102, we have, by our author, been made acquainted with octave and fifth-successions; on page 129, with covered fifths and covered octaves. We refer the pupil to them again. Our care, at present, will be to avoid these obnoxious successions. We also learned, on page 100, that the connection of chords consists in the mutual tones of the chords. In other words, *Connection of chords is the mutuality of their tones.*

But is there some method to follow in order to obtain this connection without mistake? certainly there is; it consists in the motion of the fundamental tone in the base.

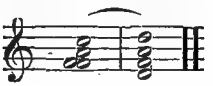
The fundamental tone of a chord may descend a *second, third, fourth, fifth,* or *sixth;* it may ascend a *second, third, fourth, fifth,* or *sixth.* These different motions of the fundamental tone of the chords are called by theorists, *Progressions of the fundamental.*

They have, also, admitted two sorts of Progressions: the *Regular,* and the *Irregular.*

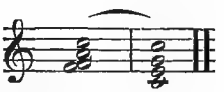
The Progression by a *third, fourth,* and *fifth* below, and its inversion of a *sixth, fifth,* and *fourth* above, is called the *Regular Progression.*

The Progression of a *second* below and a *second* above, and the corresponding *seventh*, is called *Irregular Progression.*

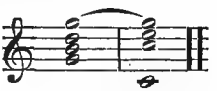
The descending progression by a *third*, gives two mutual tones.



The Progression, a *fourth* down, affords us one mutual tone.

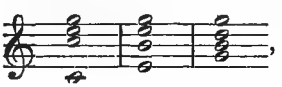


The Progression by a *fifth* gives one mutual tone.

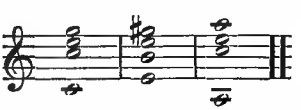


The same number of common tones is found in the inversion of these progressions; that is, in the progressions of the fundamental *sixth*, *fifth*, and *fourth* above; and they are equally good.

As to the motion a *third* above, it cannot be used but under certain conditions, and no more than one progression of this kind is admissible. Such succession by thirds above as this,


, &c.

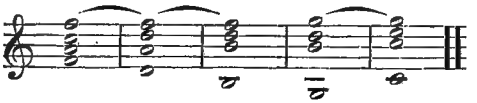
is not very desirable. The condition under which this progression is received, is this: the fundamental, after skipping a *third* above, must be brought downward a *fifth*, and the *third* of the second triad may be made the leading tone of the third triad, as,



Hence, it would appear that this progression by a *third* above, is more satisfactory when leading from a major to a minor triad, which at its turn, is made the dominant of a transient minor key by the elevation of its *third.*

All the regular progressions afford us some common tones. But the progression, a *third* and a *fifth* below, contains the *fifth* of the following chord. In such progression, we say that the *fifth* is

prepared; and whenever this preparation occurs, we ought to avail ourselves of it. Hence we will make it a rule, that *all the tones which a chord has in common with the following chord, must be prolonged into it,* as,

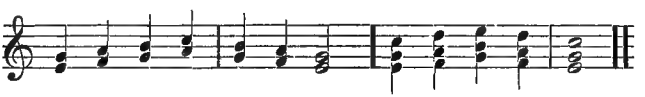


In our following exercises we will designate the mutual tones of the chords by this sign ⌒ or ⌣ placed over or below them.

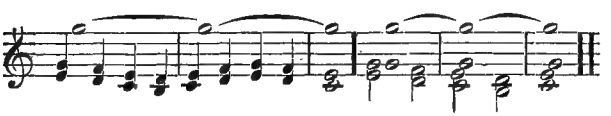
Previous to our explanations of the irregular progression, we feel obliged to give a full account of the *three harmonic motions,* which have only been hinted at on pages 90 and 91.

Theorists acknowledge three kinds of motions in harmony : the *Direct* or *Parallel, Oblique,* and *Contrary.*

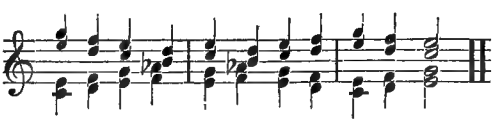
The Direct or Parallel motion takes place when two or more parts (never more than three) ascend or descend simultaneously, as,



The *Oblique motion* takes place when one or more parts or voices keep on the same tone, whilst one or more ascend or descend.



The *Contrary motion* takes place when one or more parts or voices lead in opposite direction to one or more voices, moving at the same time :



The first of these motions is especially admissable in two part compositions, but when used alone, it affords but few resources. The second is far richer than the first; the contrary motion is the most serviceable, on account of the variety of combinations to which it gives rise. The power and beauty of harmony lie in the proper

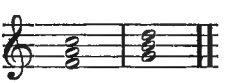
and skilful employment of these motions combined together; and from their motion, the theorists have fixed the following rules:

1st. Two fifths and two octaves, prohibited in the direct motion, are allowed in the contrary one.

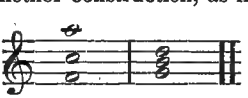
2d. No more than three parts can move in direct motion; and when they thus move, they are liable to give fifths or octaves.

3d. Four parts moving simultaneously in parallel motion, fall inevitably into faulty successions of fifths or octaves, and most of the time into both of them.

Let us now come to the *Irregular progression.* Here the chords have not, and cannot have any common tone, and consequently there is no connection between them. For the distribution of the chord-tones, in such a progression, we are under the necessity of making use of the contrary motion in order to avoid the parallel succession of fifths or octaves. As an example of that progression, let us take the two triads *f, a, c,* and *g, b, d,* which in the staff will give us the following combination of notes:

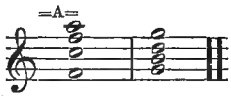


It suffices to look at these chords to perceive that no common tone exists between them, and therefore no connection. On the other hand, if we consider the tones of the chord *f, a, c,* we discover that each of them goes up to meet the nearest tone of the chord *g, b, d,* that is, three parts move up in direct motion. Let us see if, according to the *second* rule of the motions, there be not here some of the errors mentioned in it. In effect, the treble part progresses from *c* to *d,* while the base part moves from *f* to *g,* and thus gives us two fifths in parallel motion. It is not in our power to avoid these fifths, since the tones are essential to both chords; but we can avoid having them progress in parallel motion, by giving the chord-tones of the chord *f, a, c,* another construction, as in the following:



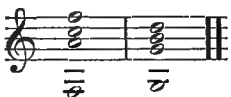
All now is right. We have obtained the *fifth* of *g, b, d,* by causing the *third* of the chord *f, a, c,* to descend to *d,* whilst the fundamental tone, *f,* goes up to *g.* But as we have adopted the

four part writing in our exercises, we shall construct again our chords in this way:



which is equally satisfactory.

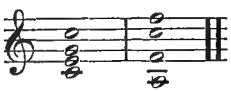
It is worth the while to advise the pupil that, to avoid faulty successions, in many instances, it does not suffice to take the contrary motion; much however depends upon the position of the chord-tones. Here, for example, if instead of placing the *third* of *f*, *a*, *c*, in the outer regions of the harmony, we had placed it in the middle ones, another error awaited us. Thus here:



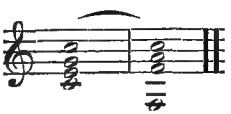
the *third* of *f*, *a*, *c*, is given to the tenor, and the doubled fundamental, to the treble. Both follow a descending motion, and progress simultaneously in fifths, the one covered (*a*, *e*), the other real (*g*, *d*); and yet we lead the parts in opposite directions. This we have avoided above, (at A,) by inverting the intervals.

We deem it proper to enter upon these particulars to show the pupil every way of keeping from faulty successions, and with how much care he must guard against them.

Finally, we cannot close our illustrations upon the subject of connection, without laying down a last observation, which is this: not to destroy, by an awkward arrangement of the chord tones, the connection which exists between the chords. Here,



an improper use of the contrary motion, has not only destroyed the connection of the chords, but has led us into the very fault of covered fifths and octaves, which we intended to avoid. As both chords have the tone *c* in common, the proper arrangement of the voices would have prompted us to tie them, by continuing *c* in the chord *f*, *a*, *c*, thus:



The connection being thus observed, all the other tones, *c*, *e*, *g*, move easily to the nearest intervals of the following chord. This observation is of the greatest moment in filling up the harmony.

EXERCISES ON THE REGULAR PROGRESSIONS.

No. 1.

No. 2.

In these examples we meet with a kind of fifths and octaves, which call the attention of the student. They are called *hidden*. A hidden fifth or octave *is that which takes place between two parts, one of which proceeds upwards or downwards, one or more degrees, while the other skips to the same intervals.* By filling up the *skips*, the hidden interval appears real to the eye, as,

Hidden 5th. Real 5th. Hidden 8va. Real 8va.

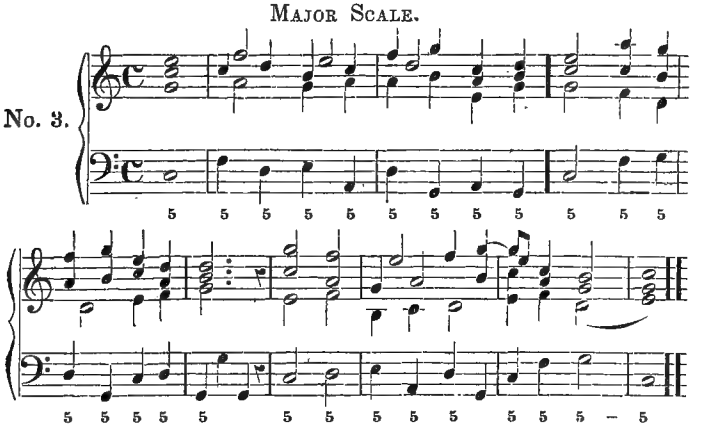
In Nos. 1 and 2 there are several instances of hidden fifths and octaves. There are instances of hidden octaves in No. 1, from measures 4 to 5, 5 to 6, 7 to 8, and 9 to 10; in No. 2, from 2 to 3, 5 to 6, 8 to 9, and 9 to 10; in both between the base and one of the upper parts. Instances of hidden fifths are found from 1 to 2, between the tenor and treble; from 6 to 7, and 7 to 8, between the base and one of the upper parts, in No. 2. But all these successions are permitted whenever the upper part moves to the fifth or octave by a single step, and the lower part skips to the same intervals, as in Nos. 1 and 2. We direct the attention of the pupil to the second measure of No. 2, in which the connection is occasionally

broken in order to raise the harmony. In the present instance, the raised parts lead in opposite direction to the base; they move easily, and their progression is natural according to the rules on page 130. These conditions ought to be attended to whenever we break the connection of the chords for the sake of raising or depressing the pitch of the voices.

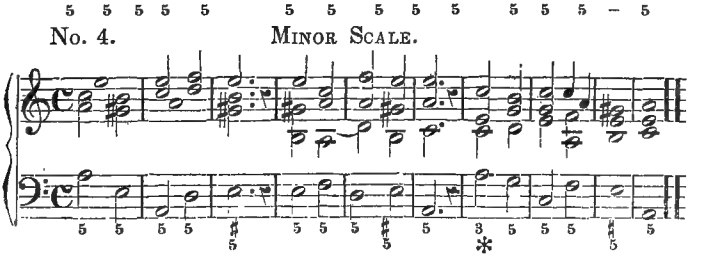
The irregular progression is not so satisfactory to the ear as the regular one; and for that reason, it cannot be carried on beyond two or three chords, except in the first inversion and in three-part-writing. We would say, too, that the ascending movement seems to be more suited for it than the descending. There are also certain degrees of both scales in which it seems more admissible. Thus, in the major scale, from *one* to *two*, from *four* to *five;* from *two* to *three*, from *five* to *six*. In the minor mode, from *four* to *five*, and from *five* to *six*, and *vice versa*. The other degrees of the latter scale cannot be used in irregular progressions without breaking into the major mode. The following exercises will serve as illustrations of the foregoing remarks:

MAJOR SCALE.

No. 3.



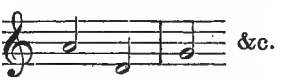
No. 4. MINOR SCALE.



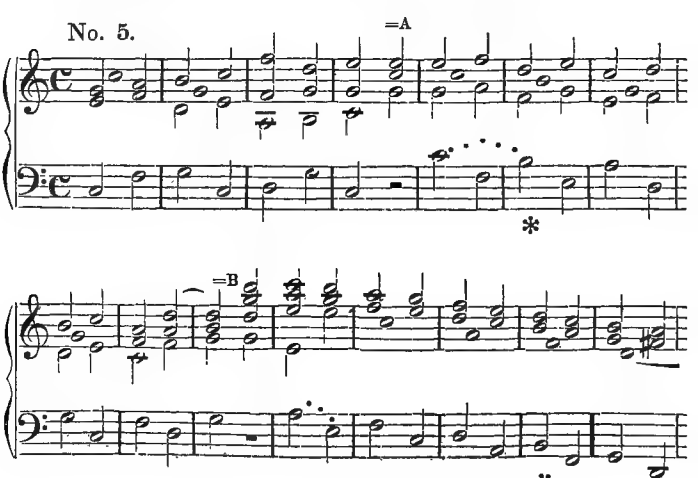
In both exercises, the irregular progressions produce consecutive fifths by contrary motion, and, in both scales, go through the above-mentioned degrees. As the minor scales afford but few indigenous chords, it is always advisable, in their treatment, to get them, now and then, into the triads of the major mode. So we have done here, at the star (*), where the minor tonic joins the dominant triad of *c*.

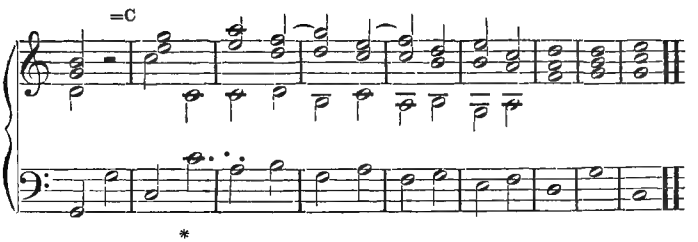
SEQUENCES, OR PASSAGES OF TRIADS.

We call by this term certain motions of the fundamental tone, stepping according to an "adopted model." This model consists of a certain number of tones, which regulate the steps of all the following, as:



Here the first tone goes down five steps to the second, and the latter goes up a fourth to the third, and so on to the end. These sequences depend entirely on the will or fancy of the composer. They may occur in any strain of a piece of music or exercise; the beginning, middle, end, are equally suited for them. The one most commonly found is the above mentioned, which some theorists have styled *Seventh-progression*, as being that of the chords of the seventh.

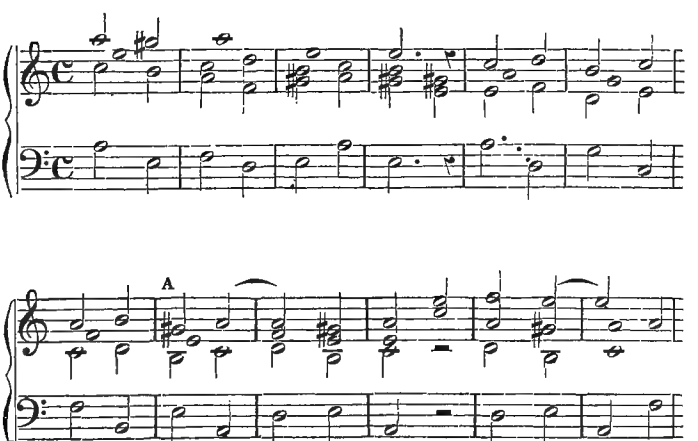


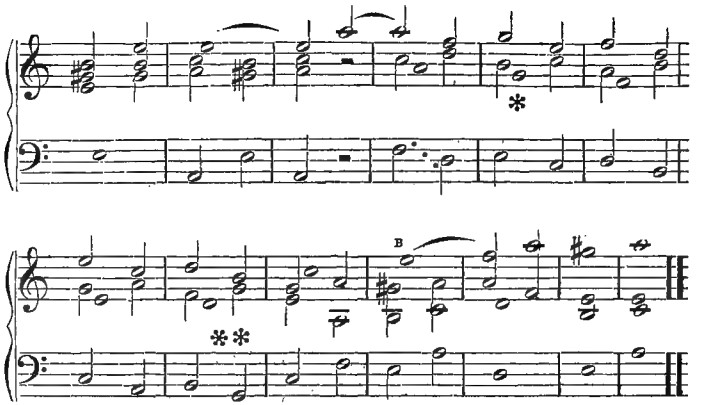


There are in No. 5 three instances of sequences, the model of which is indicated by this dotted curve • • • • • At A, B, C, too, the harmony is made to ascend to a higher pitch, in order to give the parts a regular position in the uniform steps of the progressions. At the stars, the diminished triad is led out of its usual way of resolution; (this is always the case in these sequences or passages, in which the diminished triad, losing its own character, is assimilated to the common triads, and forced into the current of the surrounding fundamentals;) and this treatment is quite satifactory.

One example more, and we shall have done with the progressions.

No. 6. MINOR SCALE.





In the minor scale the sequences are treated in the same manner as in the major; with this one but material difference, the leading note is disregarded and restored to the major mode. But it must be reinstated at the first opportunity, as can be seen in No. 6 above, at A, where the *g*♯ reappears after having been depressed at the sixth measure. So, at B, the dominant triad is introduced again, after having been made the fifth of the chord *e*, *g*, *b*, at the star; and the fundamental of the chord *g*, *b*, *d*, at the two stars. We come now to the

1. Inversion of the Triads.

A chord is inverted whenever any other tone but the fundamental is in the base; i. e. in the inversion of chords the fundamental is placed in the upper parts, and the tone given to the base is the lowest tone of the chord, but not its fundamental, as such a denomination belongs only to that tone which was the lowest in the original construction of the chord by thirds.

There are as many inversions as there are tones in the chord, not counting the fundamental. According to this principle, there are but two inversions in the triads.

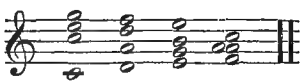
The first inversion takes place, when the third of the primitive chord is in the base; it consists of a third and sixth; it is called chord of the sixth, and figured 6.

In the second inversion, the fifth of the chord is in the base; it

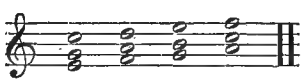
consists of a perfect fourth and sixth; it is called the chord of the fourth and sixth, and figured $\frac{6}{4}$.

2. First Inversion.

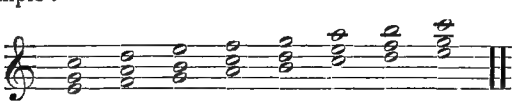
When explaining the irregular progression, we stated (Appendix, page 9) that it cannot be carried beyond two or three chords, at most. Thus, a progression like this:



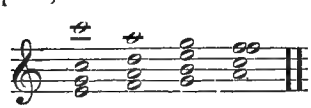
though the fifths follow the contrary motion, is neither clear nor satisfactory to the ear; but the same progression becomes unexceptionable, when the chords are put in the first inversion, as:



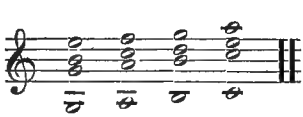
This progression might have been longer and equally good, as in this example:



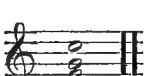
The contrary motion is even unnecessary, since there is not any faulty interval. But if we desired to have more than three parts, we must use either the contrary motion, or double one of the upper parts, thus:



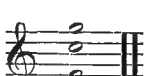
or



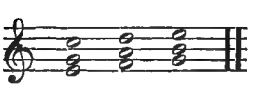
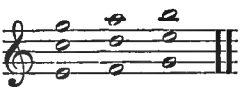
When used in three-part-writing, the succession of sixths is subject to another condition.—The third being in the base, the fundamental tone is given to the upper parts. The chord of the sixth then may occur with these two features:



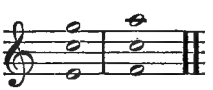
or



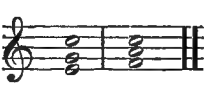
In the first case, the primitive fifth is changed into a fourth; in the second, it remains unchanged. It is evident, that in a succession of sixths we should take the first construction, and avoid the second, so as not to fall into faulty successions of fifths in the upper parts, which are not less objectionable there than in the base. Therefore, such a passage should be written thus:


not in this manner,


All these cautions are required when the sixth is used in passages of a certain length; when standing alone, it does not require so much care, and the position of the primitive fifth is almost indifferent. Thus, in the following:



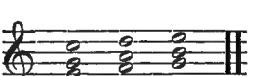
in which the fifth, which undergoes no other change than that of a higher position, is as good as this:



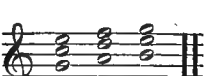
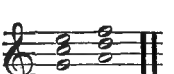
in which the said interval is changed into a fourth. The chord of the sixth needs no further remarks.

3. Second Inversion.

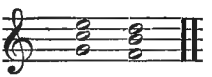
The second inversion of the triads ($\frac{6}{4}$ chord) can not, as the preceding, be made to form any succession whatever. So, if we are permitted to use such succession as this:



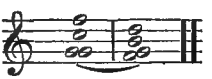
we are forbidden to use the same chords in their second inversion. Thus:


even two consecutives


are not admitted, though hidden by the outer parts. There is a single instance, in which two consecutive pure or perfect fourths are allowed; it is, when the first fourth is followed by the second inversion of the diminished triad,

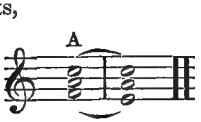
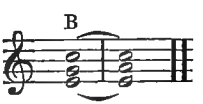


or by the third inversion of the dominant seventh,



in which cases the perfect fourth is immediately followed by a sharp fourth. The six-four chord, even standing alone, cannot be used except upon certain conditions, viz: *Preparation* and *Resolution;* because, although the perfect fourth is the inversion of a concord, yet it is considered, and really is, a sort of discord, and it cannot be denied that this interval is somewhat unsatisfactory.

Preparation, here, is done as in the discords, by making a tone lie over from the preceding chord; and the *sustaining* tone becomes the fourth. This preparation may be effected either by the upper parts,

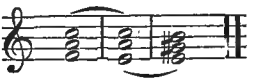
A  or by the base itself, B 

At A, the sustaining *a* of the chord *f*, *a*, *c*, and at B, the tone *e*, form the preparation of the fourth.

As to the *Resolution* of the fourth, it differs from that of the sevenths, in which the resolving chord is, with few exceptions, a fifth below the fundamental of the seventh. It is not the same with the perfect fourth, whose resolution is done in the following way: if the base resolve the fourth, it ascends or descends a step, and the fourth continues on the same tone, as:

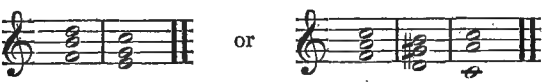
If the resolution be effected in the the upper parts, the base, fol-

lowing a contrary course, keeps on the same tone, and the fourth resolves by ascending or descending a step:



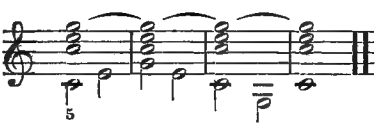
The resolution then, as well as the preparation, can be made either by the upper parts, or by the base.

Preparation is necessary only for the perfect fourth; the sharp fourth, resulting from the second inversion of the diminished triad, has no need of preparation; we may strike these chords immediately, thus:

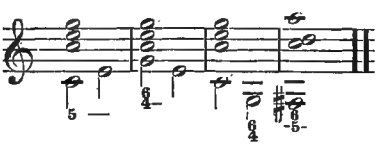


In the cadences and half-cadences the perfect fourth requires no preparation, as will be seen and exemplified in our further explanations.

Finally, we make an important observation: when the base runs through several chord-tones of the same chord, the $\frac{6}{4}$ chord, is not bound to the foregoing rules; then the following cannot be objected to:



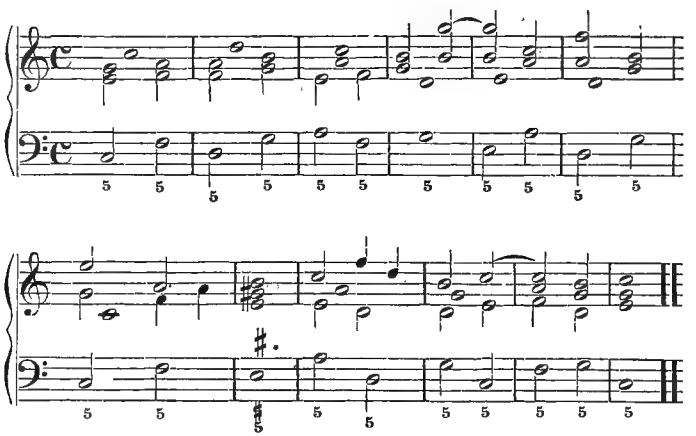
because in its progression the base meets always with, and stops on the same harmony. But if, after the fourth, the base entered upon a new chord, the preceding example should close thus:



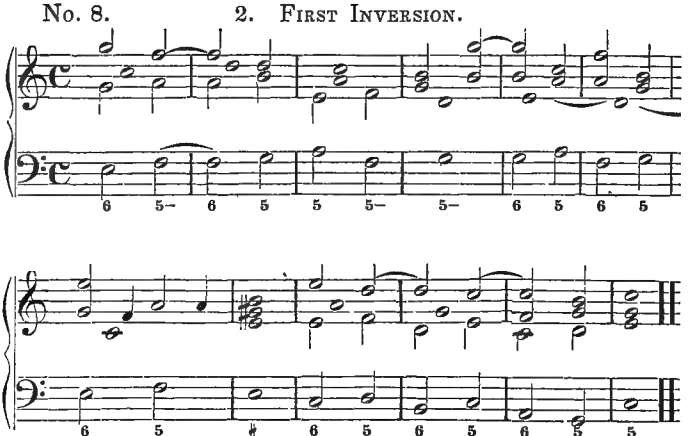
or differently, according to the ending harmony, and conformably to the preceding rules of resolution.

A Notice to the Student.—In the construction of the upper parts, we advise him to look carefully at the consecutive fifths or octaves, either real or covered, which are most obvious in the inversions, and, in many instances, very difficult to be guarded against. We now come to the exercises on inversions of the triads.

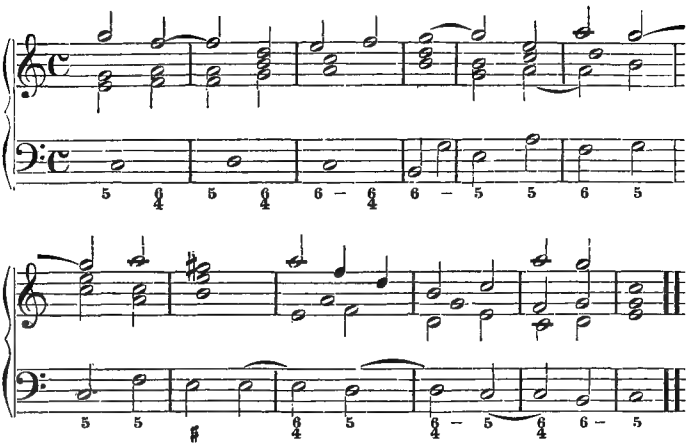
No. 7. 1. Uninverted Triads.



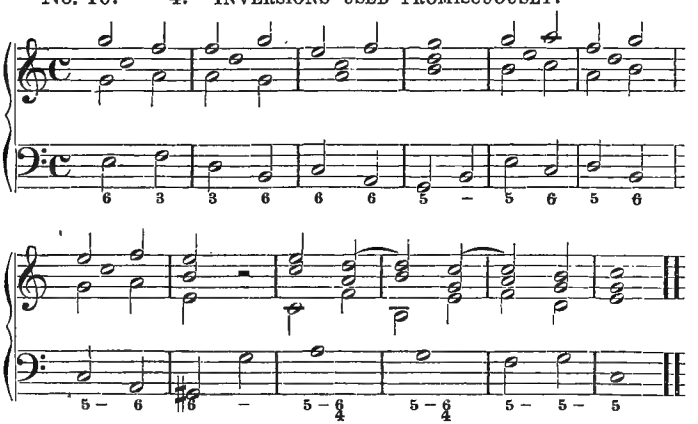
No. 8. 2. First Inversion.



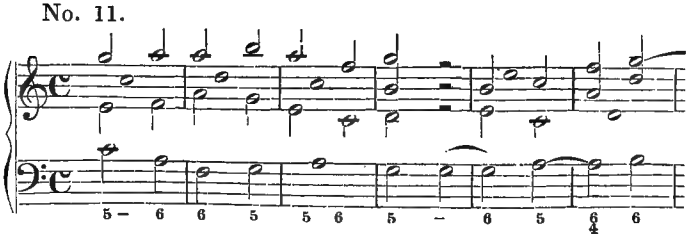
No. 9. 3. SECOND INVERSION.

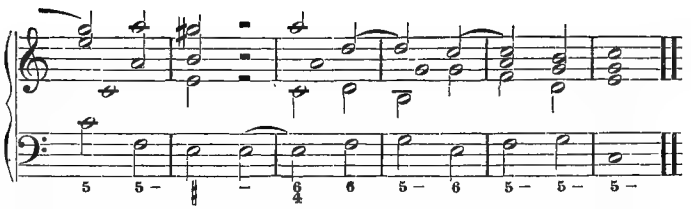


No. 10. 4. INVERSIONS USED PROMISCUOUSLY.



No. 11.





We have written the above exercises on the same harmony; 1st, uninverted chords; 2dly, first inversion; 3dly, second inversion; 4thly, by using both inversions promiscuously.

We did so, to make the student understand the different features with which the same harmony can be endowed, and induce him to compare the difference of construction of the upper parts made necessary by each position of the chords. He may derive many advantages from this comparison. After so comparing these different constructions, we would induce him to write over again several times these exercises as they are, and then transpose them into different keys, both with sharps and flats. When all this is done, he should himself compose other exercises in the same way, i. e. by varying the same harmony. We warrant that he will improve much by so doing, and will be enabled to manage dexterously the difficult work of part-building.

APPENDIX B.

The Dominant Seventh, and Dissonant Chords in general.

The dominant seventh has presented itself to us on page 102, No. 94, as arising from the sustaining subdominant tone, to which the dominant has been given to serve as the basis and fundamental tone. These two tones striking together have given rise to an interval, with which we are unacquainted, an interval termed *discord* or *dissonance;* and this dissonance, in the present case, is *a seventh.*

Theorists acknowledge two sorts of dissonances: the *proper*, and *improper*. The *proper* dissonances are three in number, the second, the seventh, and ninth. The *improper* are five, the perfect and augmented fourth, the diminished and augmented fifths, and the augmented sixth.

Strictly speaking, the seventh and second form but one interval, since the one is the inversion of the other; but, in practice, they are looked upon as different intervals, and so we ourselves will consider them. The ninth differs from them in this: it cannot be inverted. These dissonances do not form a chord alone, but need the adjunction of *two* intermediate tones to the seventh, and of *three* to the ninth, as will be perceived from the explanations which will be given of the dominant chord and its near-related nona-chord.

The consonant chord or consonance, *is in itself satisfactory to the ear*, and therefore can be used without preparation. The dissonance, on the contrary, *is not satisfactory to the ear;* and for that reason it can be used only under certain conditions, viz: the *Preparation* and *Resolution.*

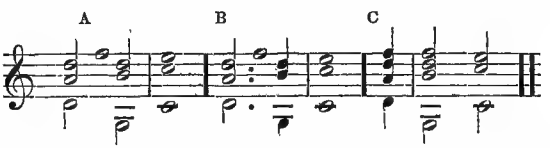
The improper dissonances, with the exception of the perfect fourth, do not require preparation, but only resolution.

The dominant seventh does not require preparation in the free style of music; yet, as there are many instances in which it ought to be prepared, it is incumbent on us to say what preparation is;

moreover, besides the dominant seventh, there are several other sevenths, the preparation for which is a law that admits of no exception.

Preparation is the introduction of a tone into a preceding chord, which belongs to the succeeding one.

This preparatory tone can be either equal in length to the discord to which it serves as a preparation, or longer; but never shorter.



The *f* of the chord *d, f, a,* is the preparatory tone of *g, b, d, f,* into which it is prolonged. At A, the preparatory tone is equal to the seventh; at B, it is longer; at C shorter, and this causes the preparation to be objectionable.

The law of resolution belongs to all sevenths in general, and the dominant triad is subject to it; this resolution is five degrees below the fundamental, or four degrees above.

Inversions of the Dominant Seventh.

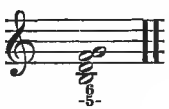
When a fundamental tone leaves its place, another tone of the chord must become the lowest; but it becomes only the *lowest tone,* and not the fundamental tone. By the term *fundamental tone,* we designate only that tone which, in the original construction by thirds, was the lowest. This remains the fundamental tone, whether it be above, below, or in the middle.

There are as many inversions as there are tones in the chord (besides the fundamental tone); consequently, every seventh has three inversions.

The dominant seventh, in its original construction by thirds, consists of a major third, perfect fifth, and a minor seventh. It is figured 7̸,

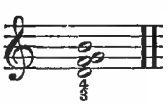
with this (x) sign below, to distinguish it from the figuring of the other sevenths, which is 7 simply.

In the dominant seventh, the fundamental tone is the most important; next to it, in importance, is the seventh. Consequently, the position of these tones gives the name to the inversions of the chord. Thus, the first inversion with the original third in the base, is called the chord of the fifth and sixth. It consists of a minor third, diminished fifth, and minor sixth. It is figured $\frac{6}{5}$



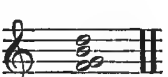
In this inversion the fifth is diminished. This fifth occurs only in the dominant seventh, being always perfect in the other sevenths. As the third of the dominant chord (now in the base) invariably moves upward to the tonic, it cannot be doubled in the upper parts, without causing faulty successions of octaves.

The second inversion (the fifth being in the base) is called the chord of the third and fourth. It is composed of a minor third, perfect fourth, and major sixth. It is figured $\frac{4}{3}$ or $\frac{3}{4}$.



Some theorists advise to prepare the fourth in this inversion, and when it cannot be prepared to suppress it. Nevertheless, in practice it occurs very often without preparation. In our exercises, we shall have it prepared, and we counsel the student to do so, in his own, especially when the opportunity presents itself.

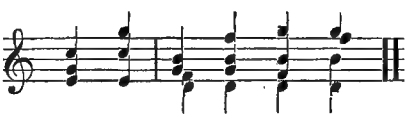
In the third inversion, in which the seventh is in the base, we count the intervals from the latter, and call it the chord of the second. It is composed of a major second, an augmented fourth or tritone, and a major sixth. It is figured 2.



This augmented fourth is again the characteristic of the third inversion of the dominant seventh; in the third inversion of all the other sevenths this fourth is *perfect*. We must likewise avoid dou-

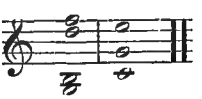
bling the base in any of the upper parts; for, as the second has to descend one step in its resolution, if doubled, it would have to do the same in the upper parts, and then a faulty succession of octaves would be unavoidable.

The names of these inversions are not influenced by any change of position in the upper parts. Both of the first two chords of the following are called chords of the sixth, and the others are called chords of the third and fourth.



This addition to our chords, though of great advantage, gives us no new difficulty, for all inverted chords follow the same rules, which govern the original and fundamental chords. Thus, when we said of the dominant seventh, that its third ascends one step, that its seventh descends a half step only, and that its fifth descends or ascends one step, the same rules still hold good in the different inversions.

A natural consequence of the regular resolution of the dominant chord is that the chord of the tonic remains incomplete; it lacks the fifth. Theorists have provided for it. When the chord is not inverted, they advise us to double the fundamental; so that, while the base goes its usual way (a fifth down or a fourth up), the other, in the upper parts, stretches over to the resolution chord, of which it forms the fifth. But then there are five parts in the harmony; if only four parts are required, it is allowed to suppress the fifth. In many instances, it is unnecessary to have recourse to the doubling of the fundamental. We obtain a full resolution, by simply giving the fifth a motion down to the fifth of the tonic, as:

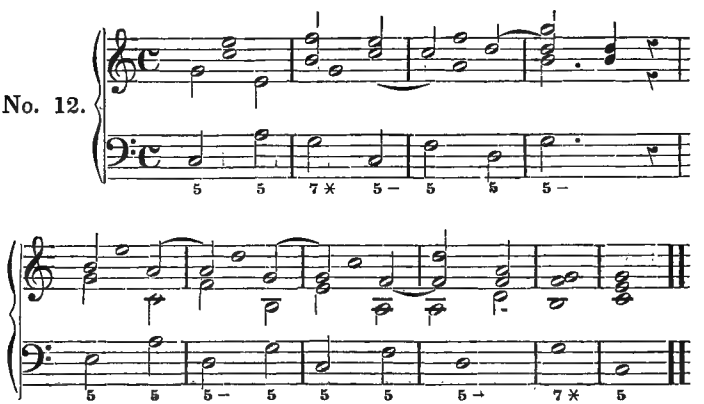


In such an event, we must give the fundamental tone in the base a motion contrary to that of the fifth. If the fifth cannot be used reg-

ularly, we must avail ourselves of the doubling of the fundamental tone; as for the inversions, it is always possible to get the resolution-chord complete, by prolonging the fundamental tone to the chord of the tonic.

Exercise, in which the fifth of the dominant seventh is left out, and the fundamental doubled.

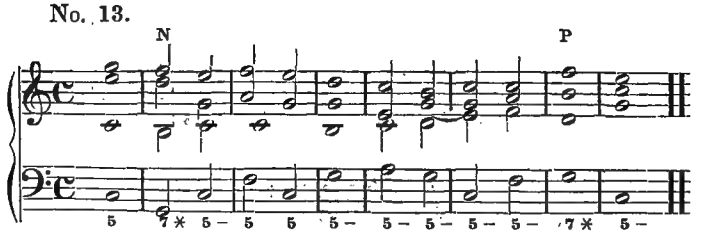
No. 12.



At the beginning of the second measure, the fifth of the dominant seventh is dropped, and the doubled fundamental tone stretches over to the next chord. So it is at the ninth measure.

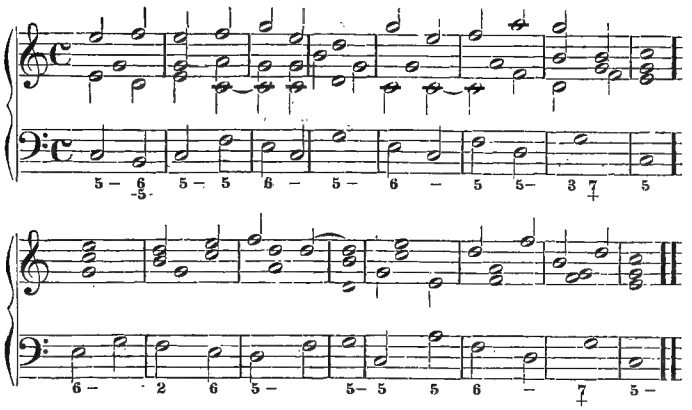
Exercise, in which the fifth is preserved, and moves downward or upward to complete the chord of the tonic.

No. 13.

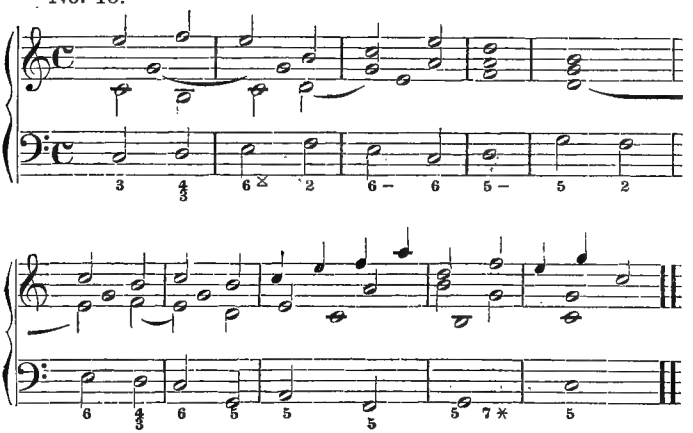


At N, the fifth moves down to complete the tonic, at P, it moves upward; in both cases the fundamental tone, in the base, takes the contrary motion.

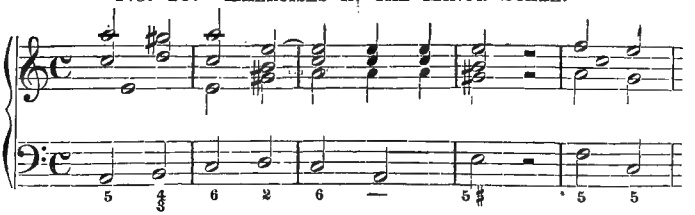
No. 14.—Exercises on the Inversions.

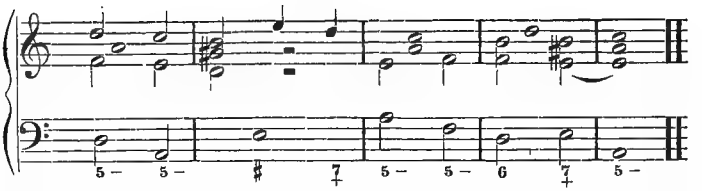


No. 15.

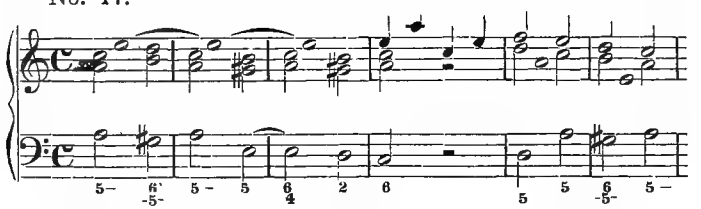


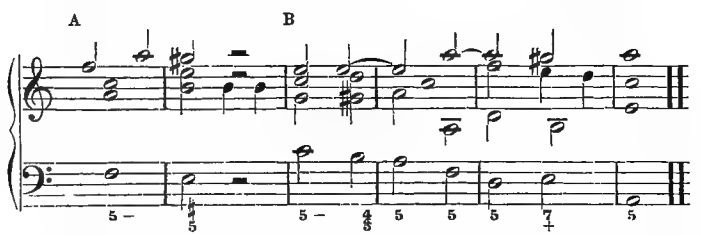
No. 16.—Exercises in the Minor Scale.





No. 17.

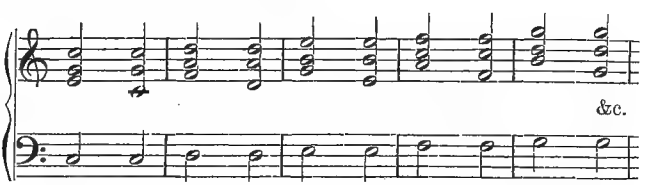




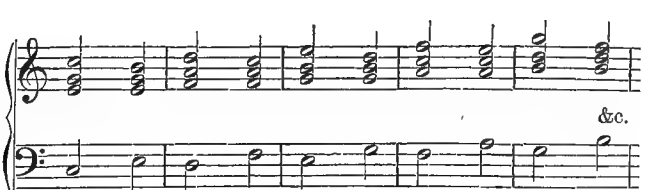
At the third measure of this exercise, there is a succession of two fourths, the one perfect, the other augmented. Two pure or perfect fourths in connection are prohibited in good harmony; but it is not so, when the second is augmented; the reverse likewise holds good, for the succession of fifths. In the present instance, the student should observe that the first fourth is prepared; he must, also, remark that at A the 6th tone of the minor scale is made the fundamental of the chord *f*, *a*, *c*, rather than the first inversion of *d*, *f*, *a*; the former is better, preparing a half-cadence, and is possessed of something more characteristic than the latter. At B, there is a sudden transition from the chord of *e*, *g*♯, *b*, into *c*, *e*, *g*♮; this change, from the dominant triad of the minor mode into the major tonic, produces a good effect.

APPENDIX C.

Four parts, progressing in parallel motion, give necessarily real fifths, or octaves, and sometimes both. So it is here, in No. 175. To render this evident, we have only to suppress the motion of the base from the fundamental to the first inversion of the chord, and form this passage, in this way:



Now, the consecutive fifths between the base and the alto part, and the consecutive octaves between the base and treble, are tangible. Is this faulty progression avoided by the motion of the base from the fundamental to the first inversion? By no means. The fundamental tone being struck forcibly in the accented part of the measure, remains unshaken in our ear for the whole measure; and the 2d inversion makes but little impression upon it. To get such passage as given in No. 175 correctly written, every second note in every measure ought to be the fundamental of a new chord, thus:

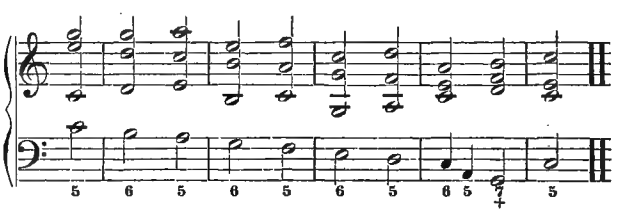


instead of 5, 6, 5, 6, &c. But we cannot adopt such a correction, because it contradicts the meaning of the author, which is a combi-

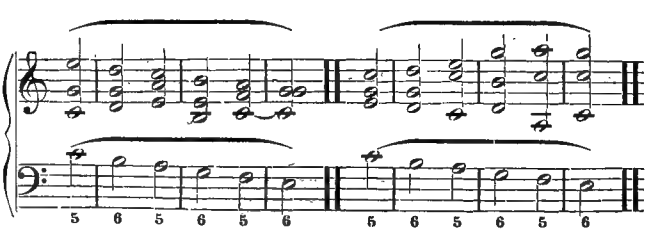
nation of the fundamental tone with that of the inversions. What is to be done, then? We must keep from such combinations as give unsatisfactory results.

No. 176 is not less faulty than the foregoing. The only difference is, that the errors above mentioned now exist in the upper parts, where the consecutives take place between the tenor and alto, for the fifths, and between the same part and the treble, for the octaves.

Again, No. 177 is objectionable. We have established as a rule, in the musical motions (see appendix, page 6), that three parts moving in parallel direction, are liable to fall into consecutives. From the beginning of the second measure to the fourth, we see in this number a succession of hidden fifths. We will attempt to correct it; but to succeed in this, we are obliged to give up the three-part writing of our author, and to adopt the four-part writing, in order to have a full harmony.



Likewise, in numbers 179 and 180, the construction of the upper parts adopted by the author, has led him into the same consecutives as in No. 177. We correct No. 179 in the same way, but with a closer harmony, thus:



The pupil should bear in mind, and never forget, that in three and four-part writing, the hidden fifths and octaves are strictly and

absolutely prohibited. But in compositions in which more than four parts are used, hidden consecutives are allowed. Were it not for such a liberty, it would be almost impossible to write any large composition, in which grand choruses frequently unite with three or four solo singers, and orchestra. I scarcely need to say, that real fifths and octaves, between the base and the upper parts, are never allowed.

APPENDIX D.

The Diminished Triad in the Minor Scale.

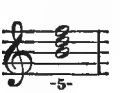
Our author tells us nothing of the employment of the diminished triad in the minor mode. We deem it proper to supply this deficiency.

The diminished triad is placed on the seventh degree of the major scale, and is considered as originating in the dominant chord, and by Marx himself as an imperfect dominant chord, that is, the dominant chord without its fundamental tone. Such a view of this chord is altogether correct. As originating in the dominant chord, it gives the same result, i. e., resolves to the tonic. On the minor scale it is placed on the second degree. From this difference of position arises a different use of it. In the major scale it resolves into the tonic, because it stands on the leading tone of the mode, and for this reason, calls the tonic after it. But in the minor scale it stands on the second degree, and therefore, nothing necessitates it to go to the tonic. The celebrated Reicha, professor of musical composition in the Conservatory of Paris, without forbidding absolutely the resolution of the chord to the first tone of the minor scale, very seldom permitted his pupils to avail themselves of it, except in the case of the half-cadences, as will be seen on page 71 and 72.

According to the principles of this great theorist, we will set forth the following rules on the use of the diminished triad in the minor mode.

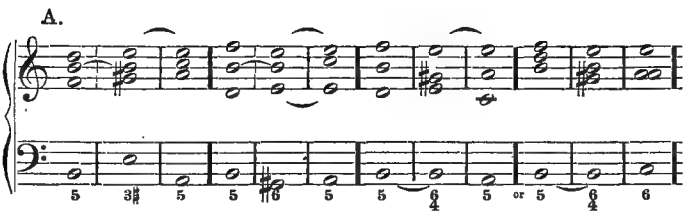
A. Treatment of this Chord.

The diminished triad consists of a minor third and diminished fifth.



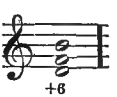
and is figured –5–.

The diminished triad, being a dissonant chord, requires resolution, but not preparation. This resolution is to the dominant triad. The motions of the fundamental tone are the following:

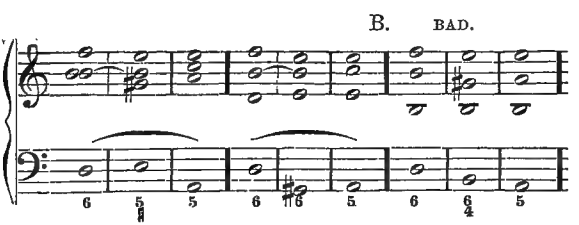


At A, the fifth *f* in the tenor part ascends a step to *g*♯, instead of moving downward to *e*. We adopt such an arrangement, because it permits the fundamental in the alto part to lie over to the triad of the dominant, which is always to be done, whenever it can be.

The first inversion is composed of a minor third and major sixth. It is figured thus: +6.

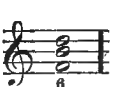


Its combinations with the dominant triad are the following:

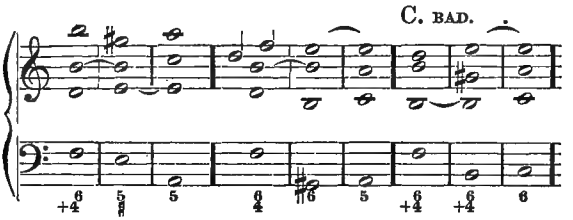


The combination at B is unsatisfactory, and must be avoided, on account of the perfect *fourth* between the treble and base, which is not, and can not be prepared.

The second inversion gives a sharp fourth and major sixth. It is figured +6/4, or simply +4.



This fourth, on account of its being augmented, needs no preparation. It is used as follows :

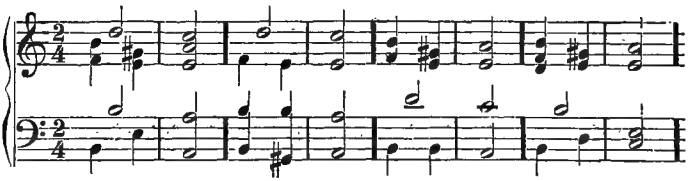


the example C is wrong, on account of the consecutive fourths.

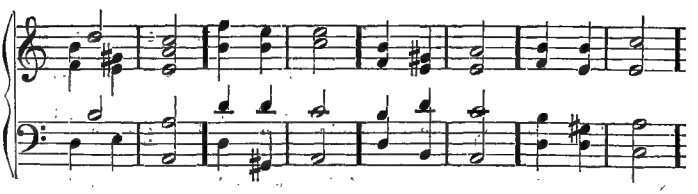
Since this chord resolves to the dominant triad, it follows that it can most properly be led to the dominant seventh of the same mode, and sometimes to the diminished fifth, arising from the suppression of the fundamental of that chord.

We will give these combinations.

A. *Resolution on the Dominant Seventh.*

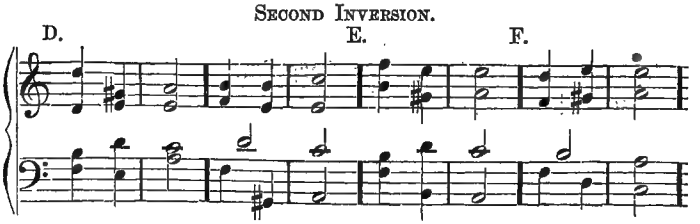


FIRST INVERSION.



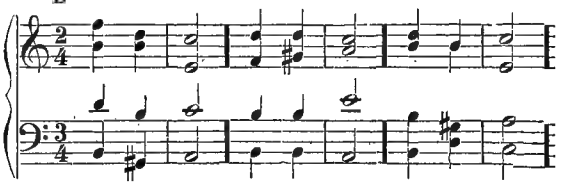
SECOND INVERSION.

D. E. F.

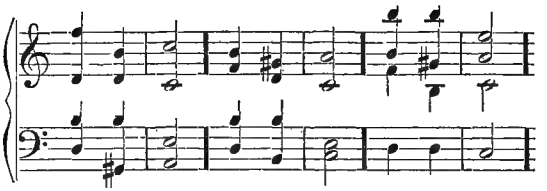


Resolution on the Diminished Fifth on the Seventh Degree.

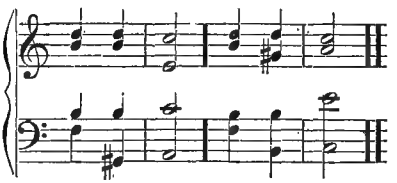
B



FIRST INVERSION.



SECOND INVERSION.



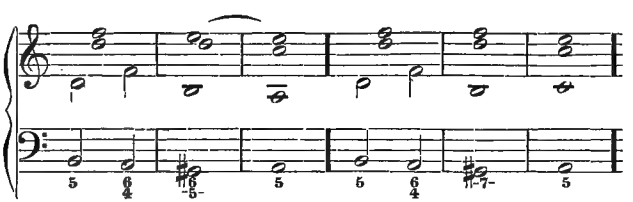
Of the two foregoing resolutions, we prefer the first (A), for this reason: that the *fifth* meets with its immediate resolution, and in the same part which sounds it. We have always given the diminished *fifth* (Ex. B.) a downward motion, to the *third* of the tonic, because here this *fifth* is a true *seventh;* though in the diminished triad of the major mode, the *fifth* may be made to ascend a step in the upper parts, especially in the first inversion. But it must not be lost sight of, that the diminished triad of the *seventh* degree in the major scale, is by itself a triad, which has an employment and a treatment of its own; and its resolution is independent of that of the dominant seventh: a character which does not belong to the diminished triad resulting from the suppression of the fundamental chord in the minor mode. Hence, we deem it better to lead down a step, the *fifth* of the diminished triad on the seventh degree of the minor scale,

when combined with the diminished triad of the second degree.

B. Some Exceptional Resolutions.

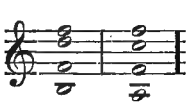
We may consider the above resolutions as the common treatment of the diminished chord in the minor mode. We must now look for some other accidental uses which have been adopted by good writers, and which, by the way, are common to both modes. We avail ourselves of the opportunity to lay them down here, as they have been omitted by our author, when giving the resolution of this chord in the major scale.

1st. The diminished triad is sometimes followed by the chord of the second degree, major scale, or fourth degree, minor, in instances like these:



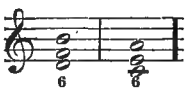
Here the chords are well connected. The perfect fourth is prepared and duly resolved. A single glance at the motion of the parts suffices to convince us that all the requisites of good harmony meet here.

2d. It can resolve to the first inversion of the fourth degree, major scale, or sixth minor, as,



In four part writing, the *fifth* can be doubled. This result is not less satisfactory than the preceding. It is owing to the smooth stepping of the base that the above successions are satisfactory. Suppose that the fundamental tone of the diminished triad skips to any other tone of the chords *d*, *f*, *a*, or *f*, *a*, *c*, and they are no longer admissible.

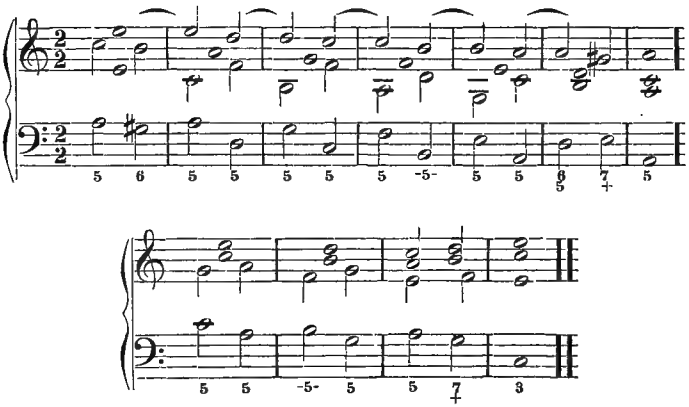
3d. We find again the first inversion of this chord followed by the first inversion of the minor tonic.



This is, perhaps, the only instance in which the diminished triad can be properly followed by the minor tonic chord. At least, we can say that the other combinations (the half cadences excepted) are very rare.

Finally, there is another employment of the diminished triad very obvious in musical composition. We mean the *passages*, or *sequences*. In such instances, the diminished triad can be followed by any triad whatever of the scale.

EXAMPLES.



Here each tone of the diminished triad is carried forcibly down, by the current of the harmony, and follows the motion of the parts, such as given by the model. These instances are enough to give a proper notion of the subject.

APPENDIX E.

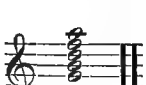
THE NONACHORD.

The Nonachord, whether major or minor, arises from the dominant seventh. It is the dominant chord, with one superadded third, which forms the ninth. These two chords, having the same fundamental, have, of course, the same resolution; but although agreeing in this point, there is between them one characteristic difference. In the dominant chord, each tone can, at its turn, become the lowest tone in the inversions; but in the nonachord, the tone which forms the ninth can never be placed in the base. In other words, *the ninth is not susceptible of being inverted.* This is a fundamental law of harmony, which admits of no exception. Now, since the ninth cannot be inverted, it follows that the nonachord has only three inversions, the very same as the dominant seventh, but somewhat modified in their figuring, on account of the added ninth. In the construction of the inversions, the fundamental and ninth must always be made to keep from each other, a distance of nine degrees.

As the position of the fundamental tone and seventh gave the name to the inversions of the dominant seventh, so here, the position of the fundamental tone, and those of the seventh and ninth, give their name to the inversions of the nonachord.

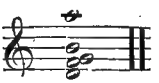
A. Major Nonachord.

The major nonachord consists of a major third, perfect fifth, minor seventh, and major ninth. It is figured $\frac{9}{7}$.

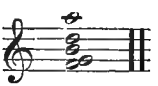


The first inversion consists of a minor third, diminished fifth, minor sixth, and minor seventh, figured $\begin{smallmatrix}7\\6\\5\end{smallmatrix}$, but in effect, $\begin{smallmatrix}14\\6\\5\end{smallmatrix}$.

The second inversion is composed of a minor third, perfect fourth, perfect fifth, and major third, figured $\begin{smallmatrix}5\\4\\3\end{smallmatrix}$—effect, $\begin{smallmatrix}12\\4\\3\end{smallmatrix}$.

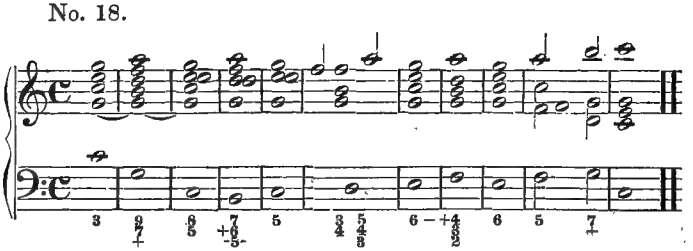


The third inversion gives a major second, major third, sharp fourth, and major sixth, figured $\begin{smallmatrix}+4\\3\\2\end{smallmatrix}$—effect, $\begin{smallmatrix}+11\\4\\2\end{smallmatrix}$.



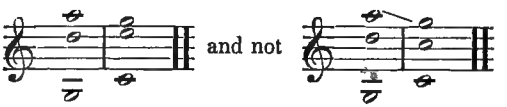
We shall now give this chord and its inversions, together with their respective resolutions. The ninth, like the seventh in the dominant chord, needs not to be prepared. The ninth, in its resolution, descends a step.

No. 18.



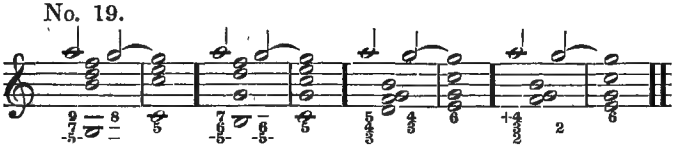
We have nothing to say of the resolutions of the chord tones of the nonachord, since it would be merely repeating what has been said of the dominant seventh. We have only to state that the fifth in the nonachord, whether in the inversions or not, must always be

led up a step, in order to avoid the consecutive fifth with the ninth, which always descends a step, thus:

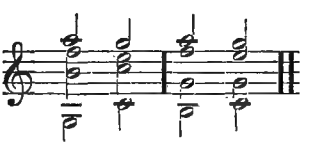


In this chord, both the seventh and ninth can be resolved at the same time as above, in No. 18, or one after the other. In the latter case, the ninth first; next, the seventh, whether the chord be inverted or not. Example:

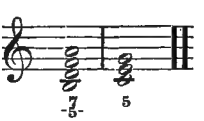
No. 19.



In four-part writing, the nonachord drops one of its chord-tones, usually the fifth, thus:

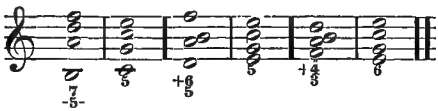


But there is another form, more generally adopted, to disencumber this chord of its overburdening tones. It consists in the suppression of the fundamental, as,

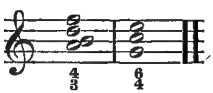


In this case, it becomes a mere seventh, with a diminished fifth, as the figuring exhibits it. But it differs from a seventh, by the resolution. Here the *b* is not a fundamental tone, but simply the third of the nonachord, of which it follows the resolution, and then moves up a half step to *c*, the fundamental tone of the tonic chord, and so forth, with the other tones, which obtain the same resolution as

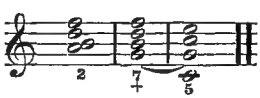
in the nonachord, since, like the latter, it must always be followed by the chord of the tonic, thus:



We have purposely omitted to give here the third inversion, as it affords no satisfactory result, on account of the consecutive fourth, as,



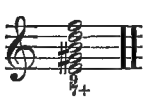
Nevertheless, if ever used, we would induce the student to cause the seventh to descend a step to the dominant, a process which changes this chord into the dominant seventh, thus:



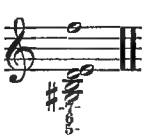
So much for the major nonachord. Let us now pass to

B. The Minor Nonachord.

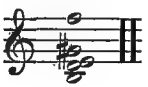
The minor nonachord, like the major, has its fundamental tone on the dominant of the minor scale. Like it, it resolves to the tonic. It consists of the same intervals, with the only exception, that the ninth is minor.



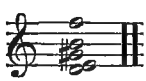
We find here three inversions, as the ninth cannot be inverted. The first is composed of a minor third, diminished fifth, minor sixth, and diminished seventh. Its figuring is $\begin{smallmatrix}-7-\\6\\-5-\end{smallmatrix}$, but its effect is $\begin{smallmatrix}-14-\\6\\-5-\end{smallmatrix}$.



The second inversion consists of a minor third, perfect fourth, diminished fifth, and major sixth, figured $\begin{smallmatrix}-5-\\4\\3\end{smallmatrix}$—effect, $\begin{smallmatrix}-12-\\4\\3\end{smallmatrix}$.

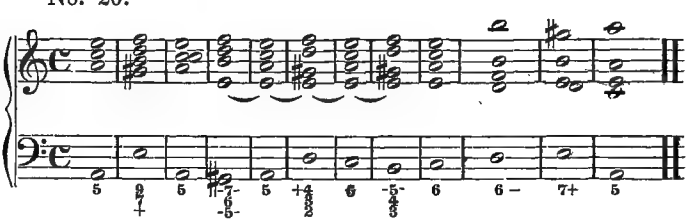


The third inversion gives a major second, minor third, sharp fourth, and major sixth, figured $\begin{smallmatrix}+4\\3\\2\end{smallmatrix}$—effect, $\begin{smallmatrix}10\\+4\\2\end{smallmatrix}$.



In the following example are given the resolutions of the minor nonachord, and of its inversions. The ninth descends a half step to the octave of the dominant.

No. 20.



The remarks that have been made on the major nonachord apply to the minor. As it would be superfluous to repeat them, we refer the pupil to the foregoing paragraph, A, down to the suppression of the fundamental tone of the major nonachord. Here lie some characteristic differences, which we shall note down in the following paragraph.

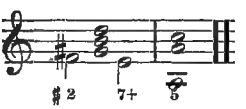
C. The Diminished Seventh.

The major nonachord, when used without its fundamental, affords us a seventh, which partakes with it of the same resolution to the tonic. Nevertheless, when we look at this seventh, it presents itself to us, at first sight, with such a character of vagueness, as to

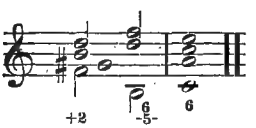
leave us in doubt as to the key to which it belongs. Thus, the seventh, *b*, *d*, *f*, *a*, may be followed by the chord, *c*, *e*, *g*, or by the dominant triad of the parallel key, *e*, *g*♯, *b*. Its resolution alone can give us a clear notion of it. It is not so with the diminished seventh. For instance, the chord, *g*♯, *b*, *d*, *f*, reminds us at once of the key *a*, major or minor.

Again, the seventh, *b*, *d*, *f*, *a*, is not desirable in the third inversion. The diminished seventh is as commonly employed in the third inversion, as in the first and second. But there are some peculiarities in the use of this inversion. If the seventh were resolved directly to the tonic, as in the first and second inversions, it would give consecutive fourths, one extended (*f*, *b*), the other perfect (*e*, *a*). In order to keep from the second fourth;

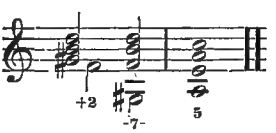
First, we cause the seventh to descend a half step to the dominant seventh, thus:



Second, we lead it back to the first inversion.



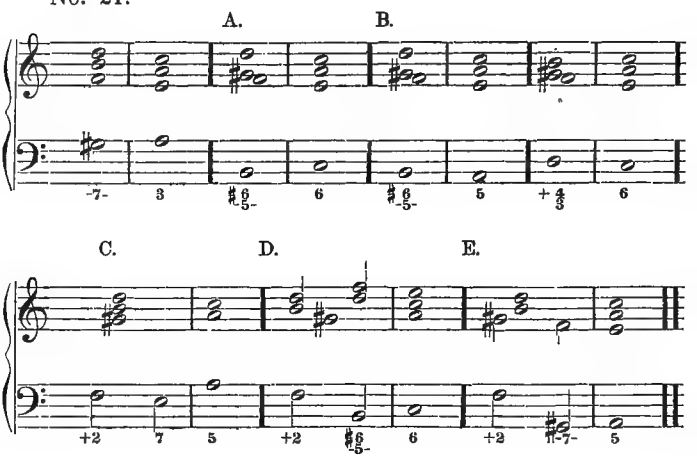
Third, it can descend seven degrees, to the leading tone, thus:



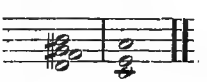
Again, the seventh, *b*, *d*, *f*, *a*, resolves only to the major tonic, *c*, *e*, *g*. The diminished seventh can be led to either modes. Thus, after *g*,♯ *b*, *d*, *f*, we are at liberty to go either to *a* major, or *a* minor.

Now that the diminished seventh is well defined, it will not be improper to write it down, with its inversions.

No. 21.

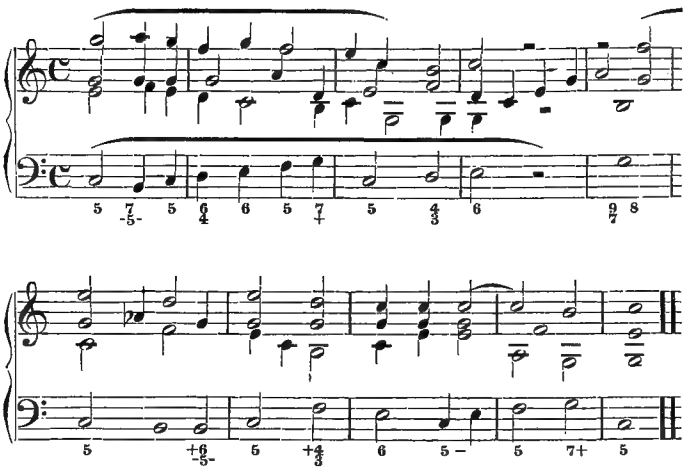


The seventh (former ninth) goes down a half step to the fifth of the tonic. The fifth (former seventh) descends also a step to the third of the resolution chord. The third, when in the base (A), should ascend; otherwise, it might fall into consecutive fifths, as may be seen at B. In the upper parts, it may descend; but care must be taken to place the seventh below the third, thus:



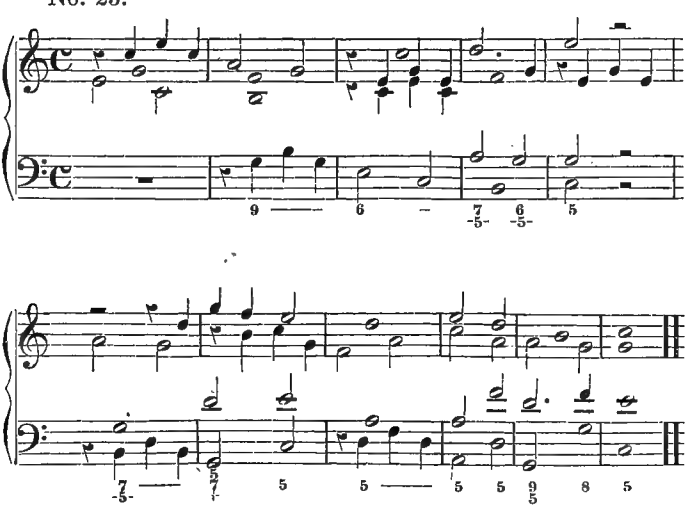
With such an arrangement, consecutive fourths are the result, which are not objectionable in the upper parts. As to the third inversion, the first way of resolution (C) is by far the best, the base there allowing the upper tones of the chord to obtain, without any interchange motion, their respective resolution. It is not so in the two other instances, which, although admitted by strict theorists, are by no means unobjectionable.

No. 22. Exercises on the Nonachords.

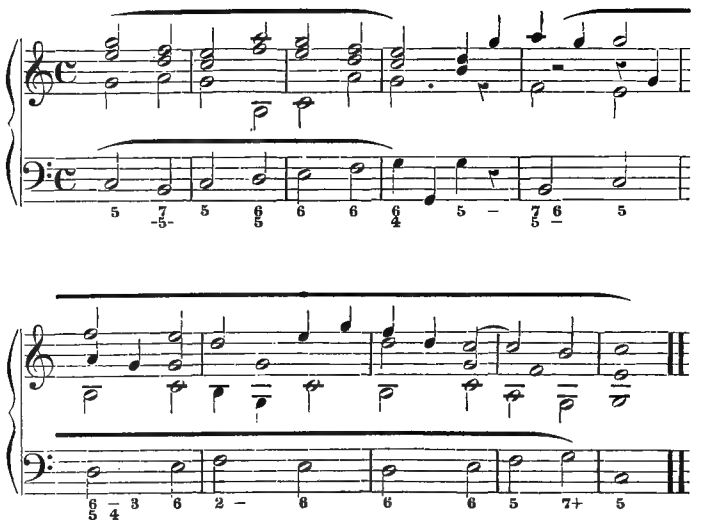


When more than one of the chord-tones are suppressed in the nonachord, as here in the fifth measure, the third should not be omitted.

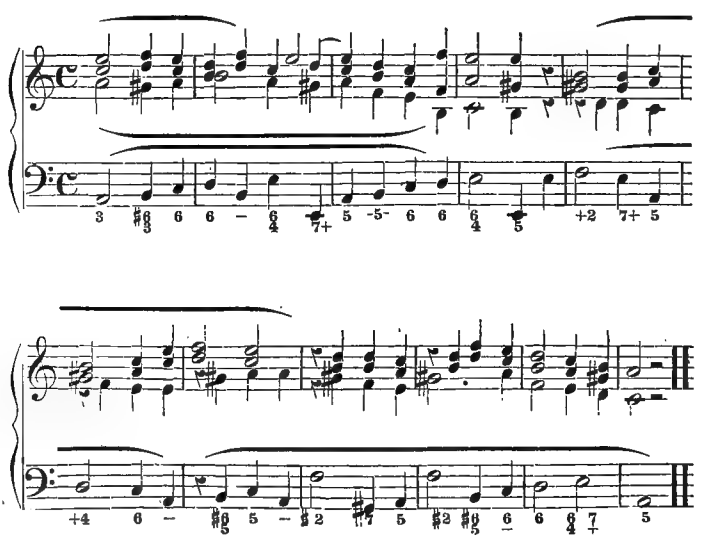
No. 23.



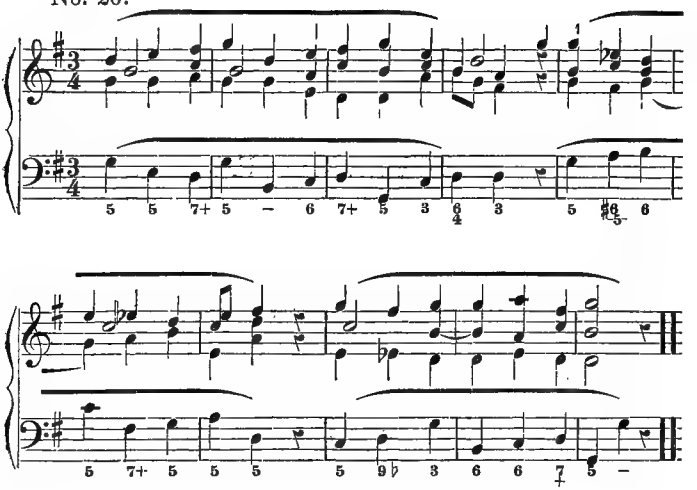
No. 24.



No 25. Exercises on Diminished Sevenths.



No. 26.



APPENDIX F.

§1. NEW CHORDS OF SEVENTHS.

In the harmonization of the major scale, *c*, *f*, *g*, *b*, have been taken as fundamental tones of major and diminished triads; afterwards, *d*, *e*, *a*, came into consideration, as fundamental tones of minor triads. We will now use *d*, *e*, *a*, as fundamentals of the following seventh:

d, *f*, *a*, *c*,
e, *g*, *b*, *d*,
a, *c*, *e*, *g*.

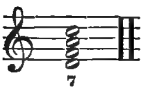
They differ from the dominant seventh in this: that they are based on minor sevenths and require preparation. In order to distinguish them from the dominant seventh, and to classify them properly, we will give them an appellation from the degrees they occupy in the major scale. So, we will call

d, *f*, *a*, *c*, the seventh of the second degree;
e, *g*, *b*, *d*, the seventh of the third degree;
a, *c*, *e*, *g*, the seventh of the sixth degree.

Of these, the first is the most conspicuous, and deserves a particular attention; first, because, like the dominant seventh, it is sometimes used without preparation; secondly, because it serves to prepare the perfect cadences, and sometimes the half cadences. We will make it a rule to prepare it, whenever it occurs in our exercises.

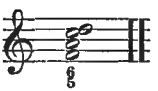
As the dominant seventh resolves into the tonic, the seventh of the second degree resolves into the dominant. Its fundamental tone goes to the dominant, its third ascends one step to the dominant, its fifth either ascends or descends one degree, and, finally, its seventh descends one step, and enters upon the dominant harmony.

In its original construction by thirds, it consists of a minor third, a perfect fifth, and minor seventh.



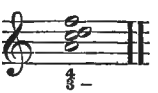
It is figured 7. Like the dominant, and all the sevenths, it has three inversions.

The first is composed of a major third, perfect fifth, and major sixth, figured $\frac{6}{5}$,

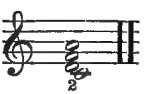


and is called chord of the fifth and sixth.

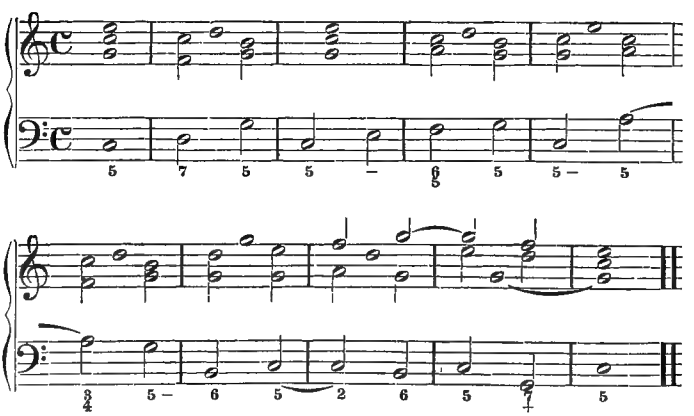
The second inversion consists of a minor third, perfect fourth, and minor sixth, and is called chord of the third and fourth, figured $\frac{4}{3}$, or $\frac{3}{4}$.



The third inversion is composed of a major second, perfect fourth, and major sixth. It is called chord of the second, and figured 2.

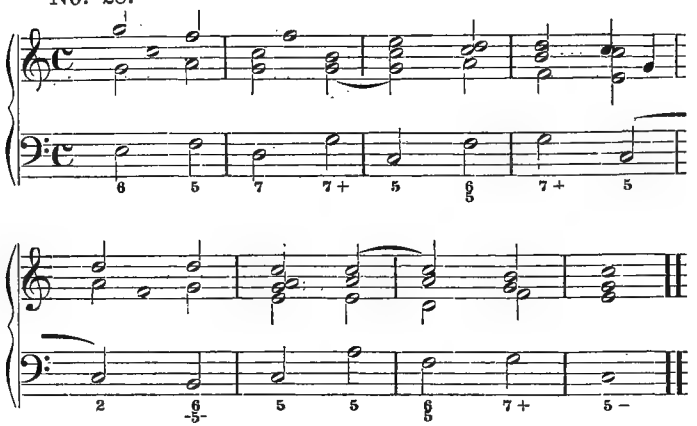


No. 27. EXERCISE.



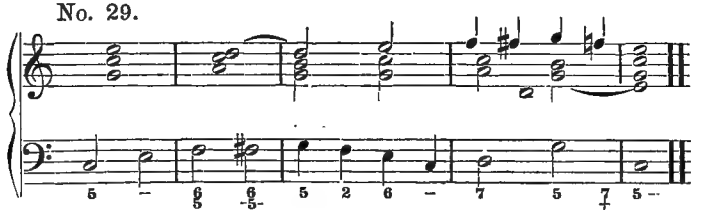
This seventh can also resolve directly into the dominant seventh, thus:

No. 28.



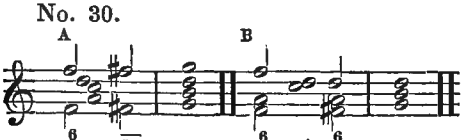
Its third can be elevated by an accidental; then it becomes a transitory dominant seventh, and forms a slight digression into a new key, as,

No. 29.



When used with such an elevation of the third, the doubling of the third must be carefully avoided, because to double the third would give either consecutive octaves, or a cross relation with the base, as appears in the following example:

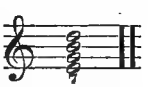
No. 30.



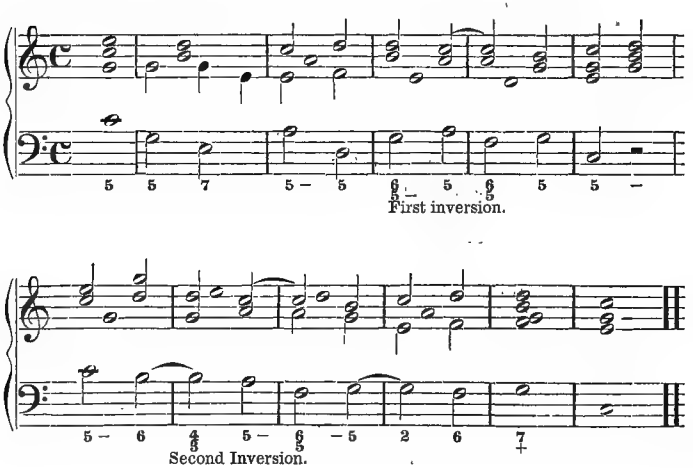
At A, the treble necessarily follows the same motion as the base, and consecutive octaves ensue. At B, the treble gives up the *f*, to descend to *d*, and the base, progressing from *f* to *f*♯, causes a cross-relation with the former *f* of the treble. Consequently, it is advisable not to double the part progressing by chromatic steps.

§ 2.—Sevenths of the Third and Sixth Degrees.

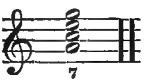
The third degree of the major scale is the fundamental tone of the seventh of the third degree, *e*, *g*, *b*, *d*. It resolves into the sixth degree, and submits to preparation. Its fundamental goes to *a*; its third ascends one step, to *a*; its fifth ascends one step, to *c*, or descends one step, to *a*. The seventh descends to *c*. It has three inversions. The first is a chord of the fifth and sixth, $\frac{6}{5}$; the second a chord of the third and fourth, $\frac{4}{3}$, or $\frac{3}{4}$; and the third a chord of the second, 2. In its original construction by thirds, it is composed of a minor third, perfect fifth, and a minor seventh.



No. 31.—Example of this seventh with its inversions.

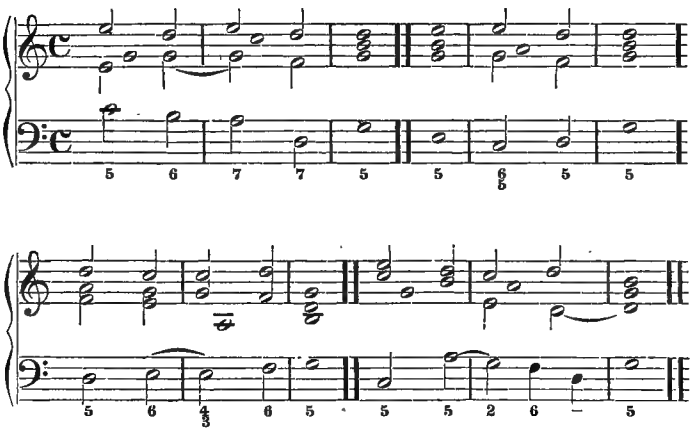


The seventh of the sixth degree has its fundamental on the sixth degree of the major scale. In its original form, it consists of a minor third, perfect fifth, and minor seventh.



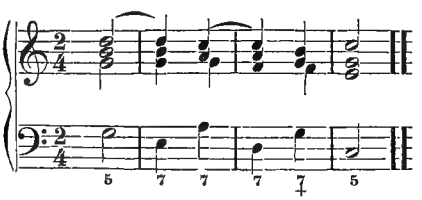
It resolves into the second degree of the scale, and has the same number of inversions as the foregoing, and is subject to the same laws.

No. 32.



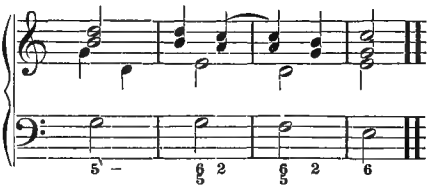
Sometimes, after a modulation to the dominant, the two sevenths now before us combine with the seventh of the second degree, to form a sequence of sevenths, leading to the primitive tonic, as,

No. 33.



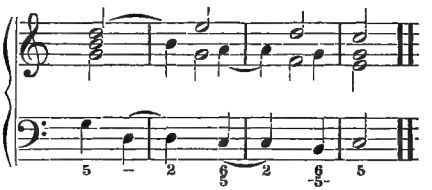
The same formula, with the first inversion of the one followed by the third inversion of the other:

No. 34.



The same again by changing the order of the inversions.

No. 35.

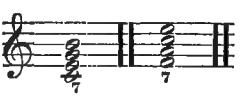


Let us now enter upon the development of the

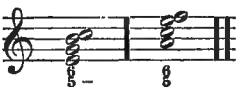
3. Major Sevenths.

Theorists give that name to the sevenths whose fundamental is the tonic or the subdominant. Let the tonic be *c*, and the subdominant *f*, and the first of these sevenths will be *c*, *e*, *g*, *b*, and the second *f*, *a*, *c*, *e*. As with the sevenths above, we shall style the former the *first major seventh*, on account of its being placed on the first degree of the scale; the latter the *fourth major seventh*, for being placed on the fourth degree of the scale. They are the most discordant of the seventh chords, and of course they ought to be prepared. They require an exquisite feeling in the composer, to be properly employed; and when used with discernment and skill, far from being harsh and rough, they strike the ear not unpleasantly.

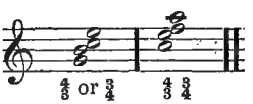
In their original construction by thirds, they are composed of a major third, a perfect fifth, and a major seventh:



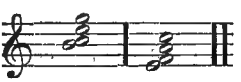
Their first inversion consists of a minor third, a perfect fifth, and a minor sixth. It is called the chord of the fifth and sixth, and figured $\frac{6}{5}$:



The second inversion consists of a major third, a perfect fourth, and a major sixth. It is called the chord of the third and fourth, and figured $\frac{4}{3}$, or $\frac{3}{4}$:

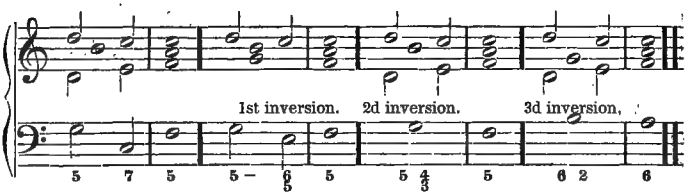


The third inversion is composed of a minor second, a perfect fourth, and a minor sixth. It is called the chord of the minor second, and figured 2:



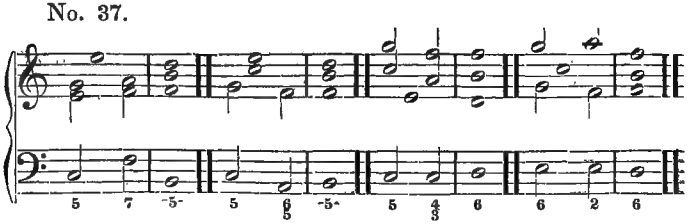
The first major seventh resolves into the subdominant, as,

No. 36.



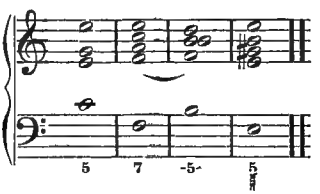
The fourth major seventh leads to the seventh degree of the scale, *i. e.*, to the harmony of the diminished triad, as,

No. 37.



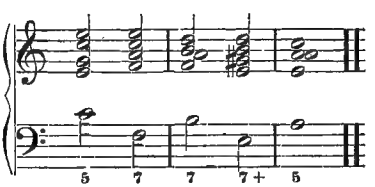
The seventh, *c, e, g, b,* resolves satisfactorily upon the major triad of the subdominant. But *f, a, c, e,* is far from leading to such a repose as might be expected, after so striking a discord as *f, a, c, e.* Its resolving into the diminished triad leaves us longing for something fuller, at least for the minor triad, *b, d, f*♯. But *f*♮ cannot be changed to *f*♯, without dragging us to a foreign key too abruptly. The only way left us to resolve *f, a, c, e,* as satisfactorily as *c, e, g, b,* is either to lead the diminished triad after the chord, *f, a, c, e,* to the dominant triad of the parallel key,

No. 38.



or to resolve the seventh, *f, a, c, e,* into the seventh of the second degree of the minor scale; and then, by a sequence of sevenths, we reach the minor key, as,

No. 39.



Let us now pass to the

3. Passages of Sevenths.

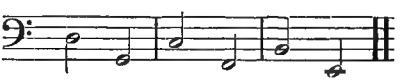
We know now how to prepare and resolve every chord of the seventh, and we are accustomed to the manner of placing them on every degree of the major scale. It remains now to combine them in passages, or sequences; and this, in consequence of our being practised in their treatment, will not be a hard task. It consists in this: to prepare the first of these chords (unless we commence at the dominant seventh) and to terminate the sequence with the dominant seventh of some parallel or relative key.

But what is a parallel or relative key?

A parallel key is that major or minor having the same signature. Thus, the parallel key of *g* is *e*, because both have the same signature—*f*♯.

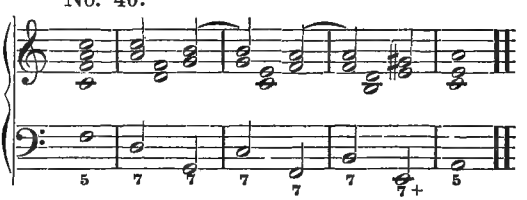
A relative key is that major or minor having an accidental more or less than the principal key. Thus, the relatives of *g*, of which the signature is one sharp (*f*♯), are, first, *c*♮, and its parallel, *a*; secondly, *d*, whose signature is *f*♯ and *c*♯, and its parallel *b*, and also the parallel key of *g*, *e* minor.

In the sevenths, the fundamental moves a fifth downward, or a fourth upward. Consequently, whenever we meet with a series of tones moving through such a motion, we can use them as fundamental tones for sevenths. Let each of the following tones



be taken for the fundamental tone of a seventh: every chord in which *c* will be met with, will serve us for the preparation of the first seventh, whose fundamental will be *d*. If we take the triad, *f*, *a*, *c*, for our preparation chord, we shall have the following passage:

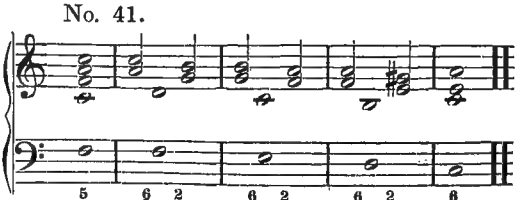
No. 40.



As it results from this example, the sustained third of the first seventh becomes the preparation to its neighbor, that of the second to the third, and soon to the last, which must be a dominant seventh:

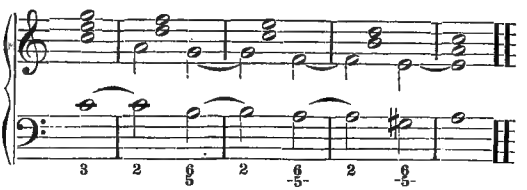
Likewise, such passages can take place with the inversions.

No. 41.



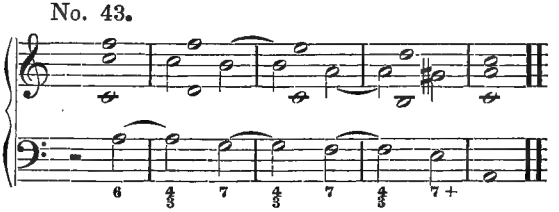
Here, there is an alternation of the first and third inversions. The following begins with the third inversion, mingling with the first, alternately

No. 42.



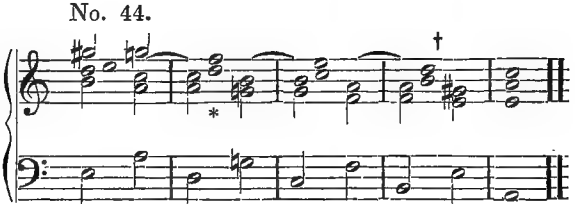
In successions of this kind, the second inversion is not so desirable as the others, on account of the fourth returning too frequently, although regularly prepared and resolved. Nevertheless, it may be properly used to render some particular idea of the composer. The following is an instance of its employment:

No. 43.



In the minor scale, the passages of sevenths are treated in the same manner as in the major; that is, the leading note is disregarded, by dropping the accidental from the dominant tone of the scale, thus:

No. 44.

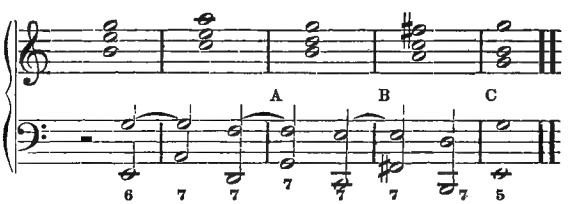


At the star, the *g* is made natural by leaving out the sharp, which here characterises the mode; but at (†), the accidental is restored,

that the minor key may not be lost sight of. The same rule holds good in the inversions.

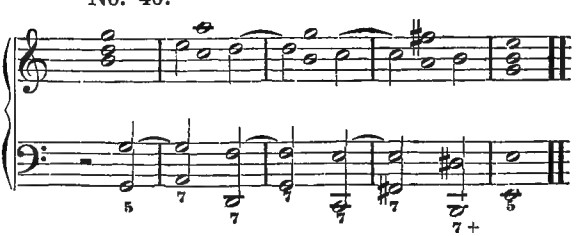
When practising the inversions of such passages, it will be advisable for the student to look carefully at the fundamental tones. As they should step a fifth downward, or a fourth upward, he has nothing to do but to try every seventh, and examine whether each fundamental keeps its required step, by placing under each inversion its respective fundamental. An example will explain our meaning. Suppose that we have to put the following example to test:

No. 45.



It is plain that part of these inversions do not agree with the fundamentals beneath them. The third inversion of a seventh leads necessarily to the first inversion of the next; *i. e.*, to the chords of the fifth and sixth. Now, if we recall the sevenths, at A, B, C, to their original construction by thirds, we immediately find that there is a foreign tone in each seventh, which does not agree with the fundamentals below. If we take away this foreign tone, and in its stead double the fundamental, we shall have the following succession, in which every thing is correct.

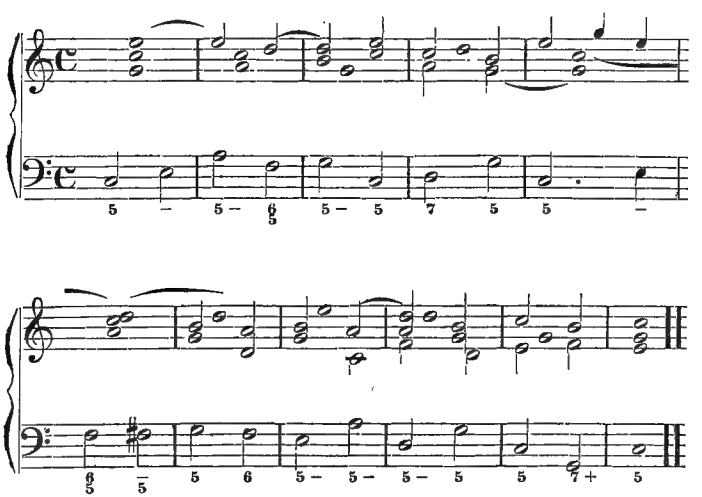
No. 46.



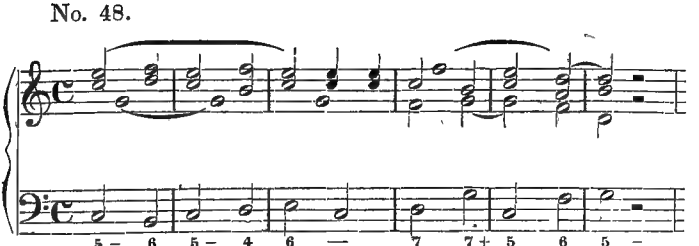
For, every upper tone answers to its respective fundamental. We

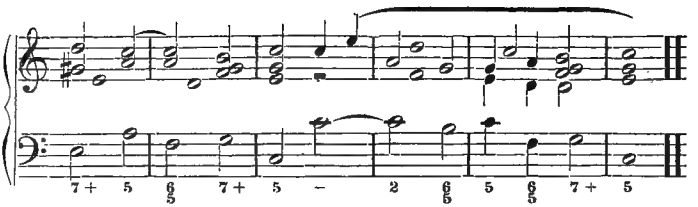
urge this practice upon the student. He will avoid numberless mistakes by attending to the regularity of the parts. We remind him, likewise, that all the sevenths, except the dominant, ought to be prepared, at the beginning of the passages; and that these passages must close with a dominant seventh, in order to rest upon a tonic of one of the relative keys. In conclusion, we propose to him the following exercises on the sevenths in general, and we strongly recommend him to transpose them into several keys. Finally, presuming on his industry, we advise him to write some others of his own.

No. 47.

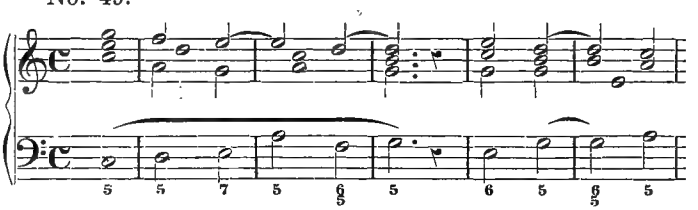


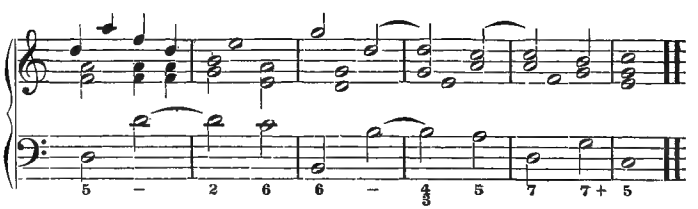
No. 48.



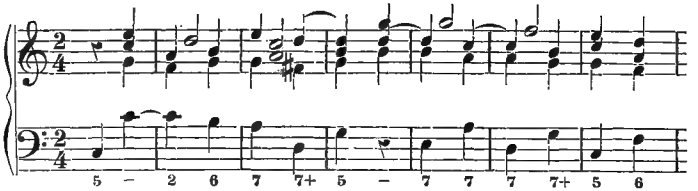

7 + 5 6/5 7 + 5 – 2 6/5 5 6/5 7 + 5

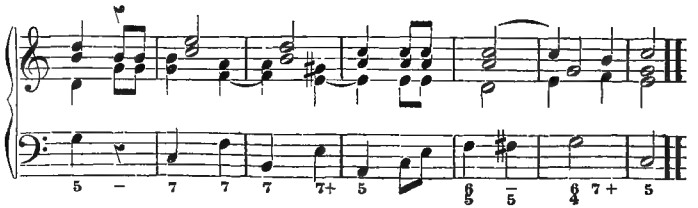
No. 49.


5 5 7 5 6/5 5 6 5 6/5 5

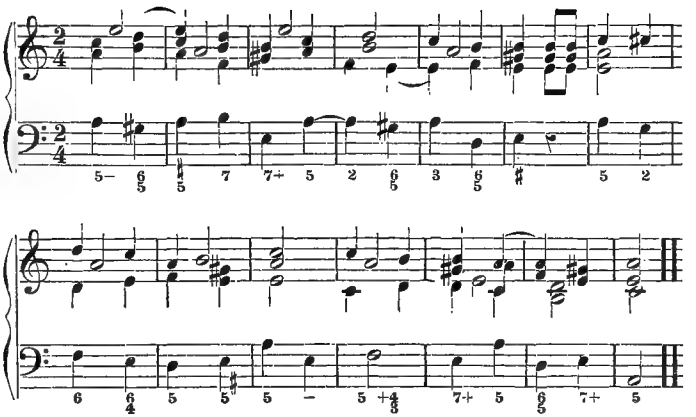

5 – 2 6 6 – 4/3 5 7 7 + 5

No. 50.

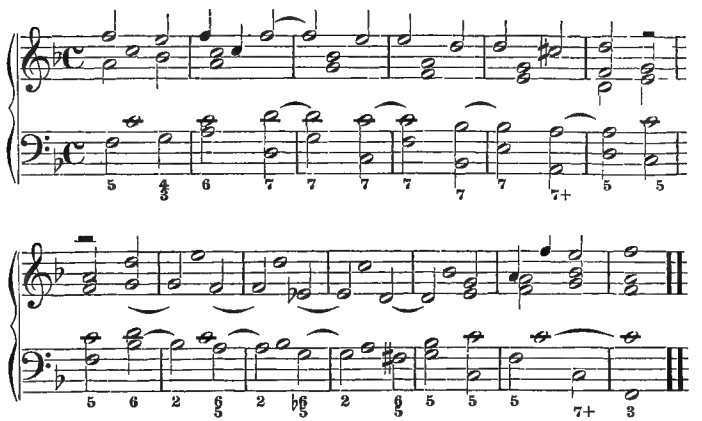

5 – 2 6 7 7+ 5 – 7 7 7 7+ 5 6


5 – 7 7 7 7+ 5 6/5 – 5 6/4 7 + 5

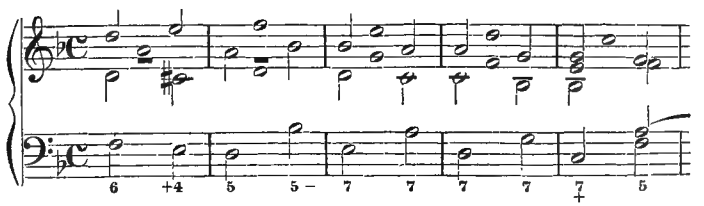
No. 51.

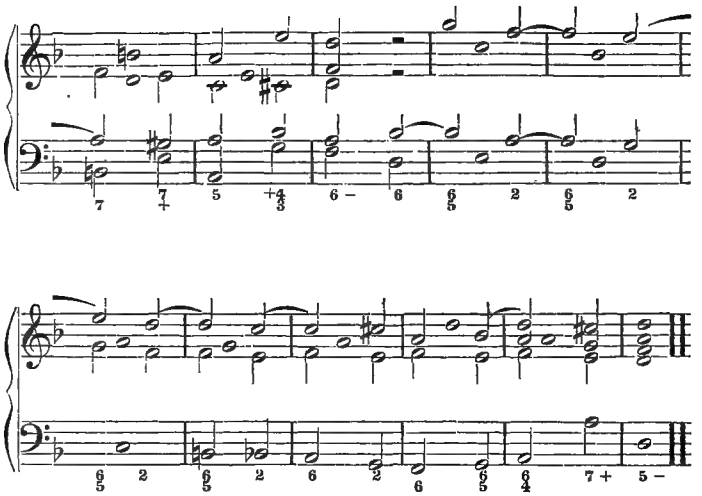


No. 52. PASSAGES OF SEVENTHS.



No. 53.





The Final Cadence.

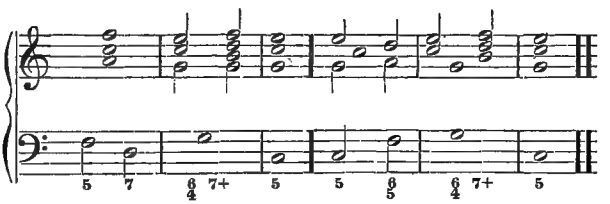
The final cadence, or simply the cadence, is the conclusion of a musical period, on the tonic, either of the principal or relative key, or of any other, properly settled. The *dominant chord* is necessary for the perfect cadence, but it must be preceded by some other chords, which serve to make the cadence plainer and more solemn. This run of chords forms what is called by theorists a *formula of cadence.*

In the beginning of this chapter, we stated that the seventh of the second degree is, after the dominant chord, the most conspicuous, because it serves to prepare the perfect or final cadences. We shall now consider it as leading to such a result.

Used thus, it often undergoes several changes in the resolution of some of its tones, namely: the third can either ascend to the dominant, or descend to the sixth of the second inversion of the tonic chord. When its fundamental is doubled, it ascends a step to the said sixth, and then the third goes upward to the dominant. The seventh is prolonged, and becomes the fourth of the second inversion of the tonic; but finally, it must descend a step to the

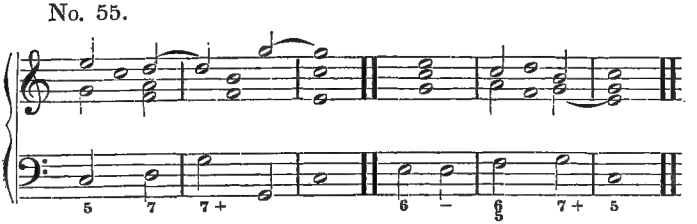
third of the dominant seventh. The fundamental follows its usual way of resolution.

No. 54.



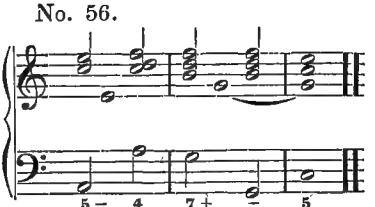
This is an exception to its resolution. In the perfect cadences, it may also resolve immediately into the dominant seventh.

No. 55.



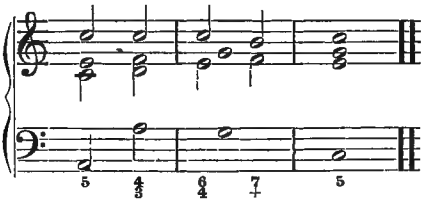
In the second inversion, not only the seventh must be prepared, but also the fourth, and it must directly resolve into the dominant seventh, as,

No. 56.



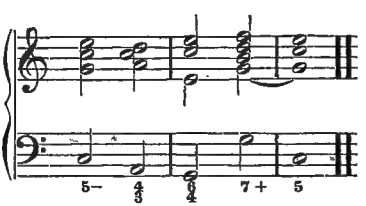
Hence, the following is not satisfactory, as it is encumbered with too many fourths; and yet the first of the two fourths is prepared.

No. 57.



The following is not only unsatisfactory, but even wrong, the first fourth not being prepared.

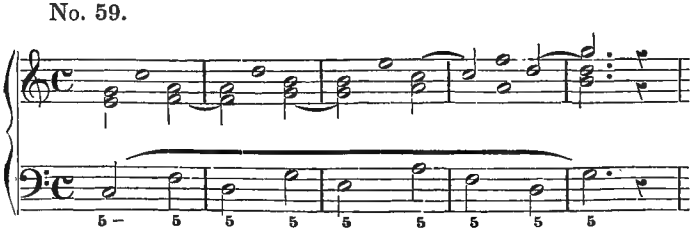
No. 58.

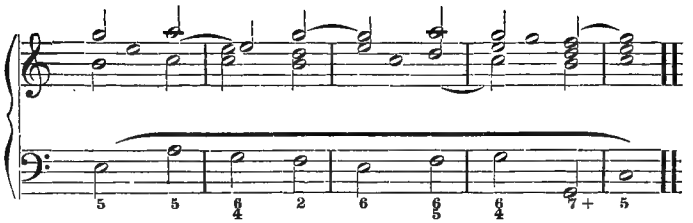


The same rules apply to the seventh of the second degree of the minor key.

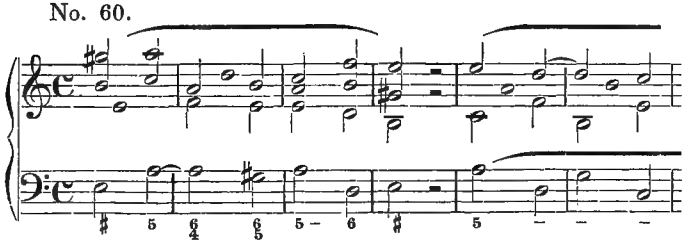
Exercises on this Seventh, as preparing the final cadence in both modes:

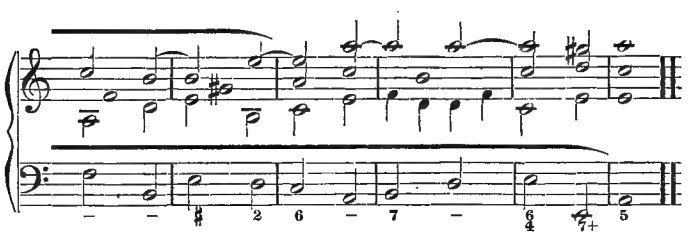
No. 59.



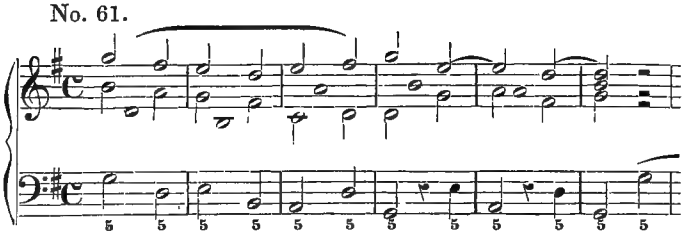


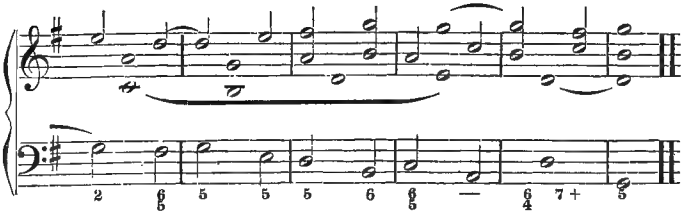
No. 60.



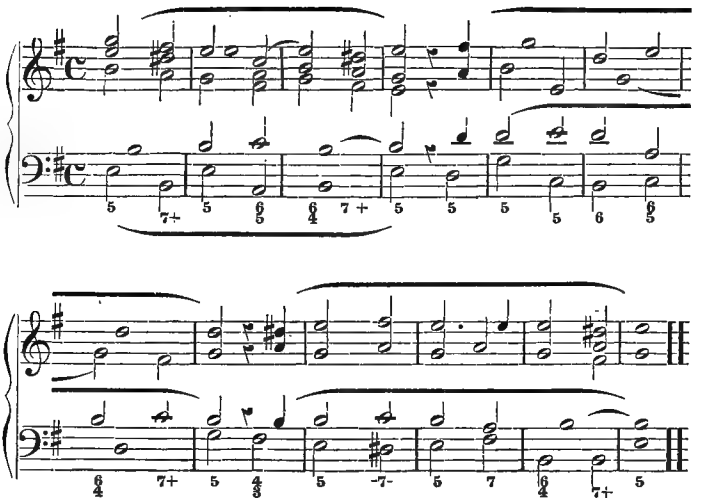


No. 61.



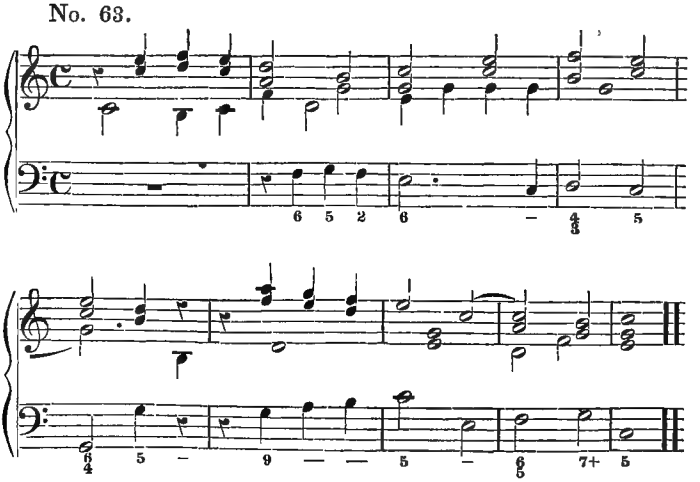


No. 62.



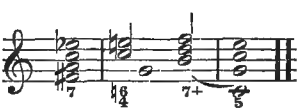
In the following example, the seventh of the second degree resolves directly into the dominant seventh, without destroying the fullness of the cadence.

No. 63.



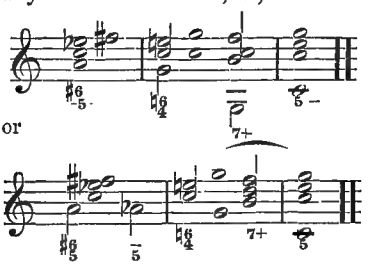
The Diminished Seventh on the Subdominant, originating in the Seventh of the Second Degree.

In preparing the final cadence, the seventh now before us gives rise to a new diminished seventh, of which it is the fundamental tone; its minor third is made major, and the chord changes into a minor nonachord of the minor key, *g*. But although resembling a minor nonachord as to its form, it is quite unlike it in its resolution. The fundamental is always left out, and *f*♯, *a*, *c*, *e*♭, only remain; *i. e.*, a diminished seventh on the subdominant, whose resolution is this: the fundamental tone ascends one step to the dominant, and the third descends one step; the fifth lies stationary; the seventh does the same, and changes into the major *sixth* of the second inversion of the tonic, which finally resolves into the dominant seventh, as,

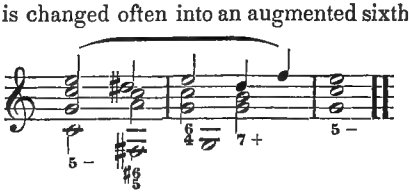


As can be seen from the example, in its original construction by thirds, this diminished seventh consists of a minor third, diminished fifth, and a diminished seventh.

Of its inversions, the first alone is used to prepare the final cadence. It consists of a minor third, diminished fifth, and major sixth, which occasionally is made extended, as,

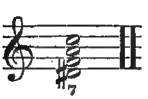


In order to give the voices a freer and easier motion, this diminished seventh is changed often into an augmented sixth, as,

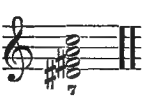


Here, *d*♯ represents *e*♭; and, no doubt, it is an easier step for the treble than *e*♭, followed by *e*♮. It becomes a kind of leading note, which leads smoothly and unmistakably to *e*♮. Here we think it proper to advise the student never to give the voices, especially in choruses, such intervals as require difficulty of intonation, and skill in the performers. As we cannot look for great skill in those to whom the performance of choruses is entrusted, it will be advisable to avoid carefully the following intervals: sharp fourths, diminished and superfluous sixths, and diminished and superfluous fifths. All these intervals are nothing but break-neck places for chorus singers.

There is, also, in the minor scale, a diminished seventh, on the subdominant, originating from the seventh of the second degree, to which belong the developments we are now unfolding; but particular attention must be given to the third, which must be elevated, in order to avoid the diminished third, when the chord is in its original construction by thirds. This diminished third arises from the elevation of the fourth degree of the minor scale, as,

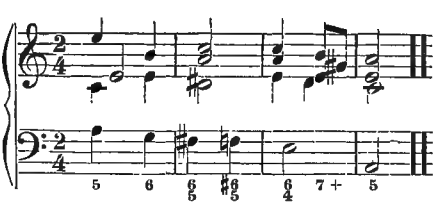


This is not admitted; and should be avoided thus:



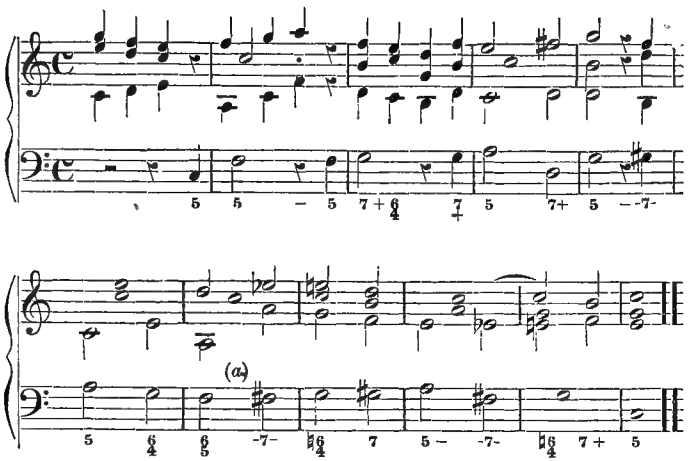
Such a caution is unnecessary when using the first inversion, in which the sixth can occasionally be made superfluous, as,

No. 64.



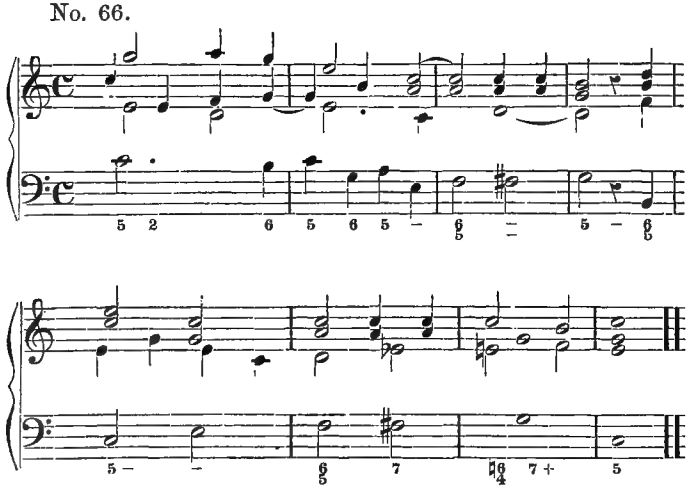
Some exercises will now illustrate the foregoing directions.

No. 65.



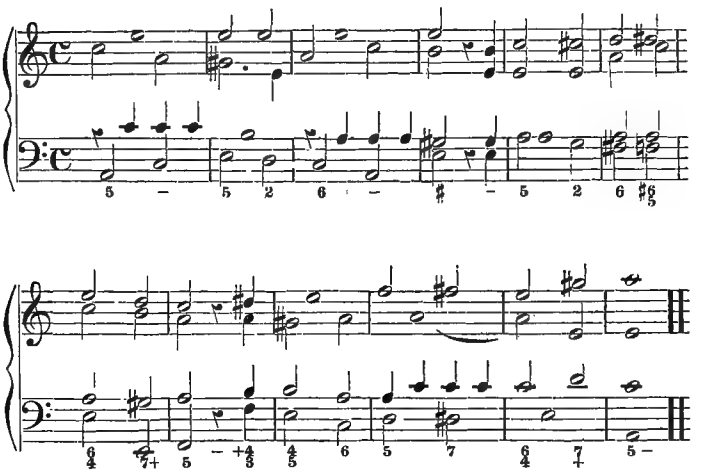
The seventh of the second degree, in its first inversion, as well as in cadences, can occasionally resolve into this diminished seventh, as it results from *a*, in the preceding example. The following gives the same inversion, resolving into the diminished seventh, and preparing the end.

No. 66.



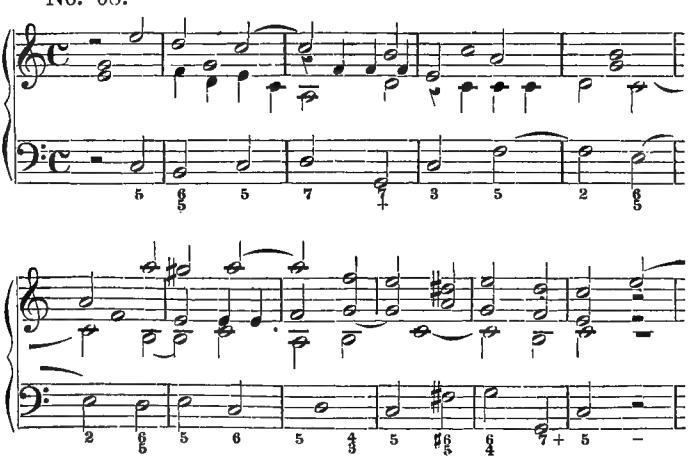
The diminished seventh preparing the final cadence in the minor key.

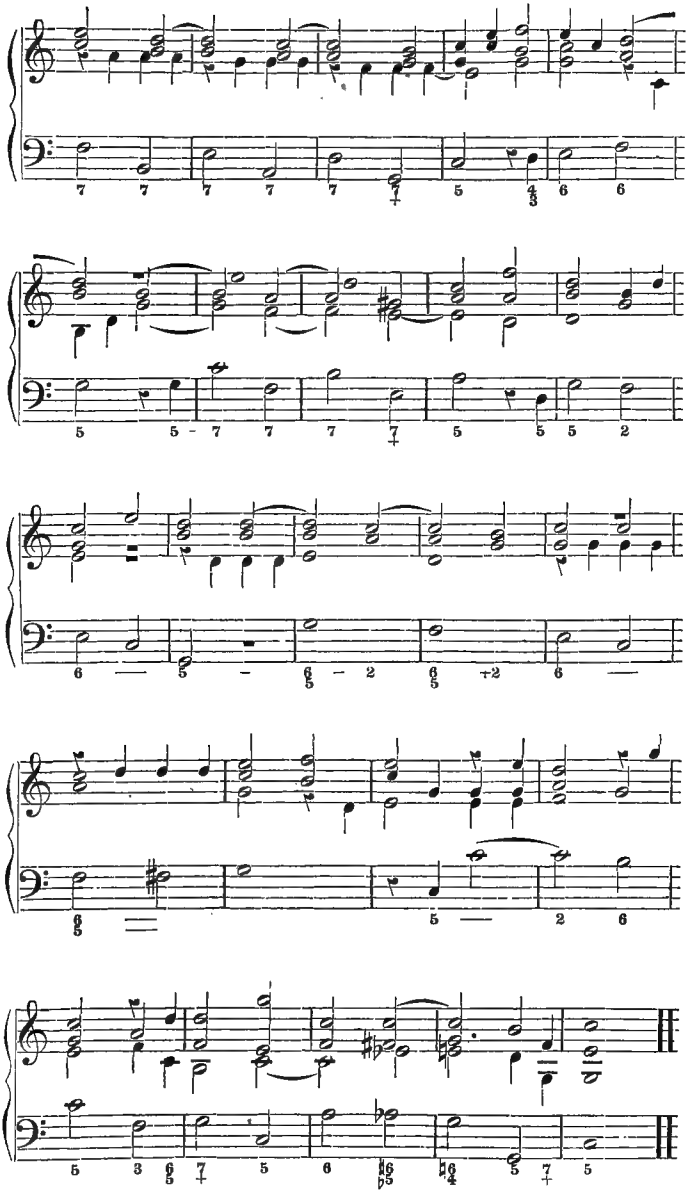
No. 67.



EXAMPLE on sevenths, in general, and formulas of final cadences.

No. 68.

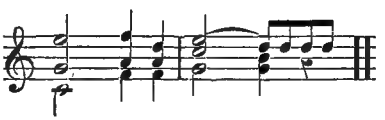




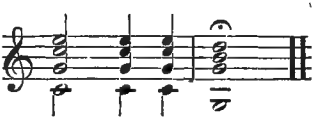
Half-Cadences.

In the foregoing chapter, we have fully unfolded the whole matter of the final cadences, and pointed out the chords preparing them. We now come to the half-cadences.

The half-cadence is a temporary form of repose of the whole harmonic body, on the dominant triad. This repose is in some cases limited to a certain length.



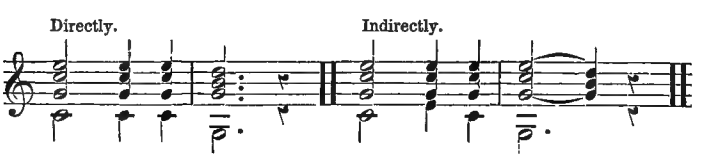
In others, it is indefinite, as for example, in the case of the *pause,* or organ-point.



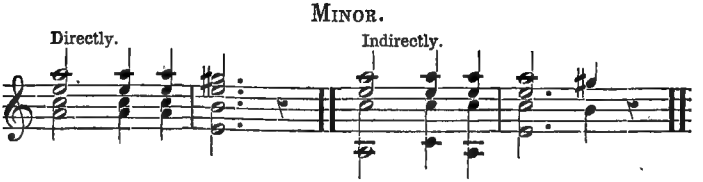
As in the final cadences there are some chords especially appropriate to prepare the end, so also there are particular chords appropriate to prepare the half-cadences.

There are two ways to form a half cadence: the one *direct,* when the chord used to form a half cadence is followed directly by the dominant triad; the other *indirect,* when the dominant triad is preceded by the second inversion of the tonic triad. In the latter case, the fourth does not need any preparation.

We can go to the half-cadence, firstly, from the tonic triad, in both scales.

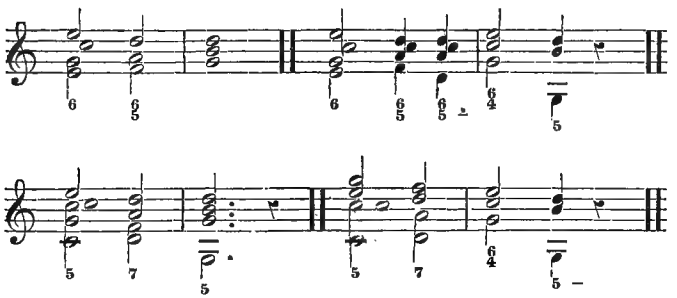


Minor.

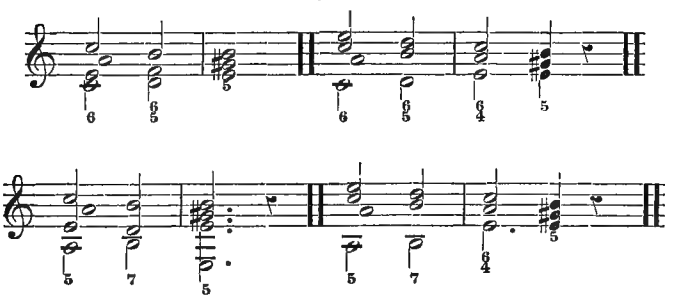


Secondly, from the first inversion of the seventh of the second degree, and from the uninverted chord itself, in both scales.

MAJOR KEY.

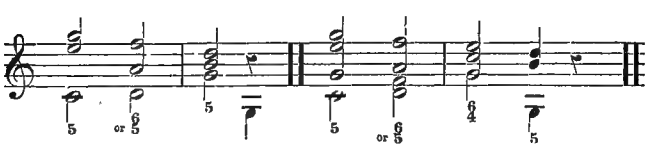


MINOR KEY.

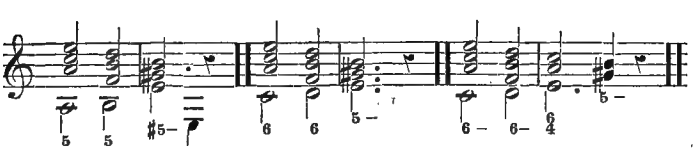


Thirdly, from the chord of the second degree, in both scales, as,

MAJOR KEY.

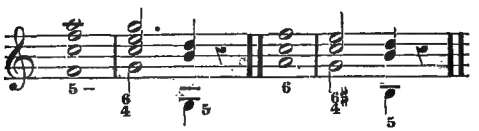


MINOR KEY.

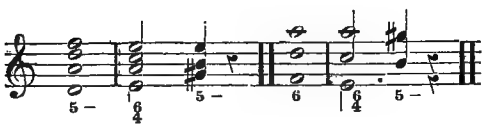


Fourthly, from the chord of the subdominant.

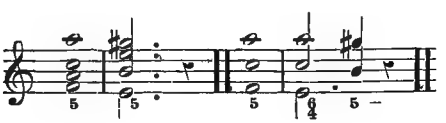
MAJOR.



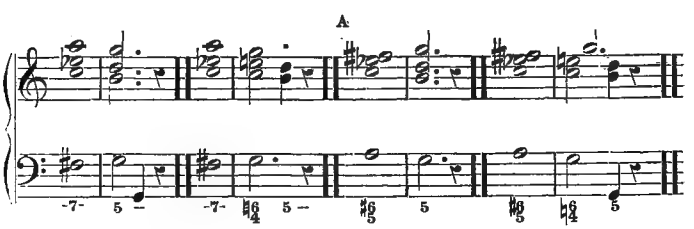
MINOR.



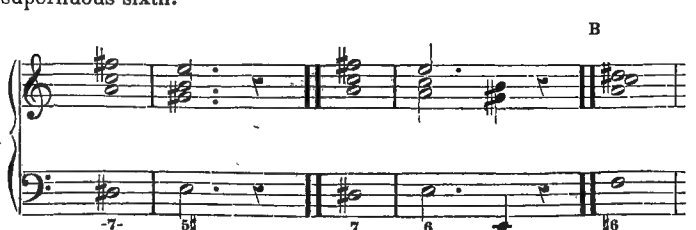
Fifthly, from the chord on the sixth degree of the minor scale, as,

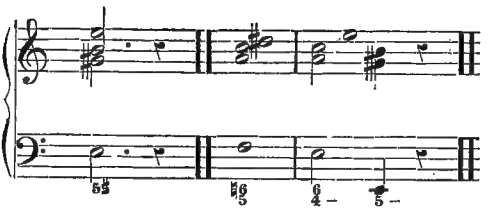


Sixthly, from the diminished seventh on the subdominant, and its first inversion.



The fifth measure (A) of the foregoing contains a fifth succession, which is admitted by some theorists as mitigated by the superfluous sixth.



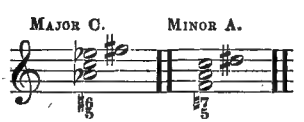


At B there is a fifth succession, admitted for the same reason as in A, above.

Besides these, there are two chords, chiefly used to prepare the half-cadences, viz.: the chords of the fifth and superfluous sixth, and the chord of the augmented fourth, and superfluous sixth.

§ 1. The Chord of the Fifth and Superfluous Sixth.

This chord is composed of a major third, perfect fifth, and superfluous sixth. It stands on the sixth degree of both major and minor scales.



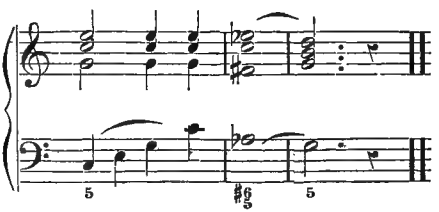
It seems to be the first inversion of that diminished seventh, placed on the subdominant, with which we are already acquainted; but its perfect fifth forbids us to trace it to this seventh, of which the first inversion has a diminished fifth. We will, then, consider it as standing by itself.

It has two ways of resolution.

In the first, the fundamental descends one step to the dominant. The third can either ascend or descend one step. The fifth descends one step, and forms a fifth succession, with the base. But this fifth is generally permitted by the theorist, as being mitigated by the superfluous sixth. In effect, it has nothing conspicuous or disagreeable to the ear. On the other hand, it is very easy to

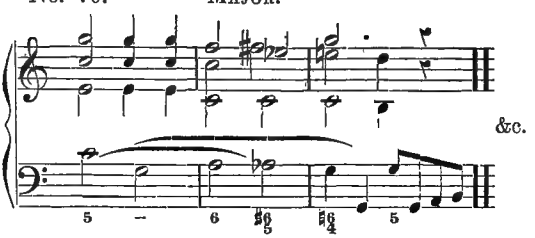
avoid it, should any one consider it objectionable. Finally, the superfluous sixth leads forcibly up to the dominant.

No. 69.

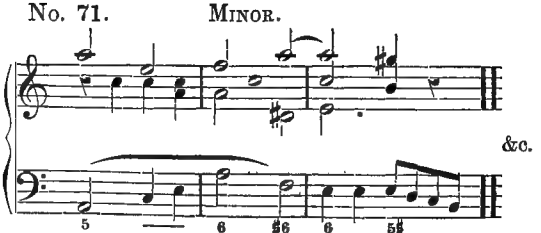


In the second, the fundamental and superfluous sixth moves as in the foregoing case ; but the third stretches over to the dominant, and forms with it a perfect fourth, which changes finally into the third of the dominant triad. The fifth continues to the dominant, forming with it a major or minor sixth, according as this chord is used in the major or minor scale.

No. 70. MAJOR.



No. 71. MINOR.

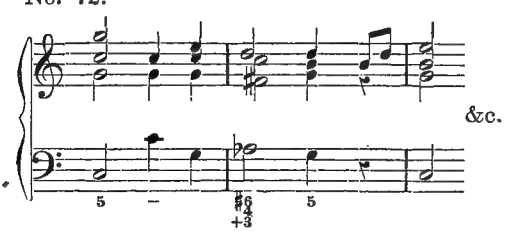


As can be seen from these examples, thus resolved, the progression causes no consecutive fifths.

§ 2. The Chord of the Third and Fourth, with the Superfluous Sixth.

This chord looks like the second inversion of the seventh of the second degree with the major third; but it is considered as standing by itself. Its fundamental moves down to the fundamental of the dominant triad; its third *must* descend to the third of the same dominant triad; its fourth is prolonged, and becomes the fifth of the same chord. Finally, the sixth goes forcibly up to the octave of the fundamental of the dominant, thus:

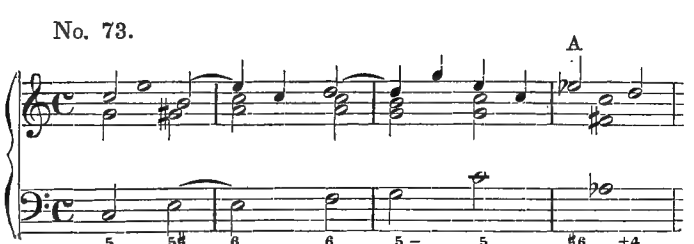
No. 72.



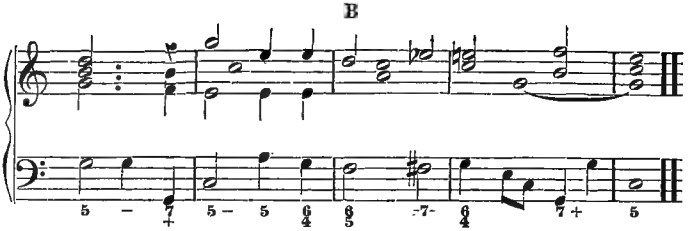
This fourth, being augmented, has no need of preparation.

Very often these two chords (♯6 5 and ♯6 +4 3) combine together; that is, the fifth of the former resolves into the fourth of the latter, which afterwards follows its usual way of resolution; and this combination also affords another means of avoiding consecutive fifths.

No. 73.

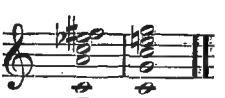


B

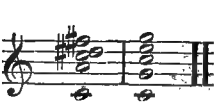


As can be seen at A, the perfect fifth of the fifth and sixth falls on the sharp-fourth of the third and fourth, which resolves into the triad of the dominant. At B, the first inversion of the seventh of the second degree changes into the diminished seventh, as it has been intimated, on page 67.

We cannot forbear to draw the attention of the student to a formula of half-cadence, which has been employed by Haydn, in his work, "*The Seven Words.*" We have already said, on page 65, that the diminished seventh of the subdominant, and its first inversion, only, are used in the half-cadences. The second inversion of this chord is often resolved thus: the base stretches over to the fundamental of the tonic chord, as:

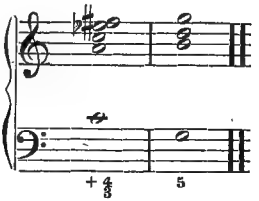


Sometimes the minor third is changed into an extended second, thus:

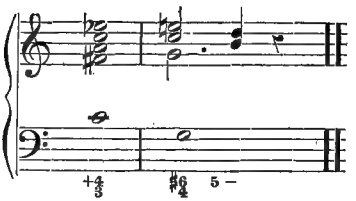


In the last case, the resolution remains the same with the preceding one; that is, the diminished seventh resolves into the chord of the tonic.

Haydn, in "*The Seven Words,*" deviating from the above resolution, has made *c* jump down to the dominant, thus:

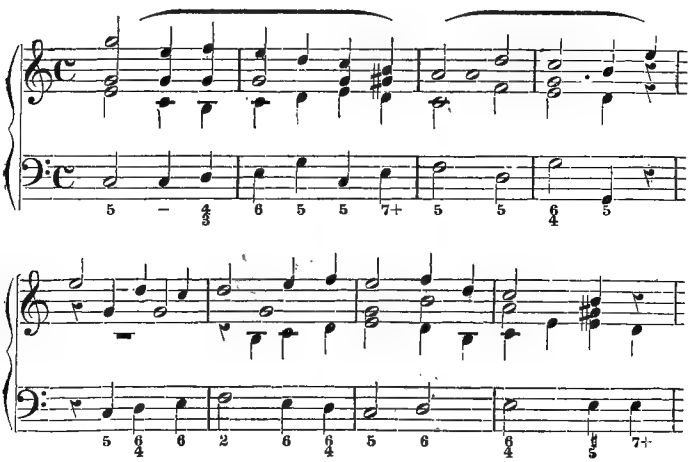


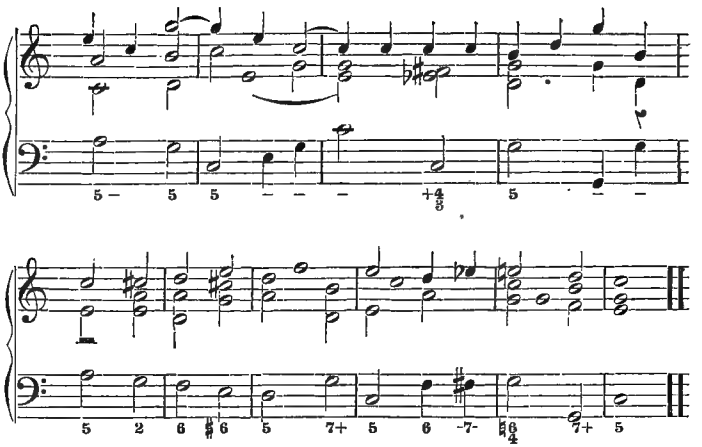
or



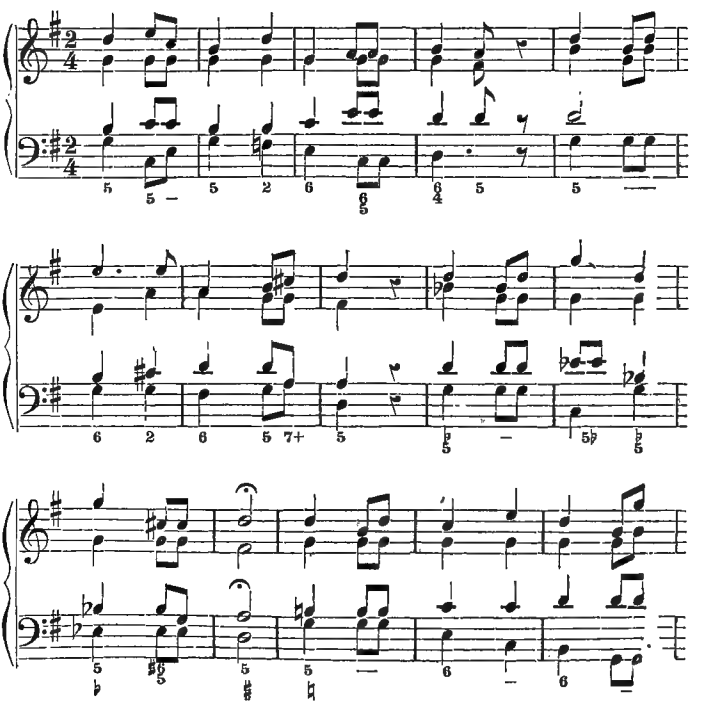
making it a formula of half cadence. Before him, no composer had made the second inversion of this seventh deviate from its usual way of resolution; notwithstanding this great authority, this formula of cadence is seldom used. As employed by Haydn, however, it is very effective.

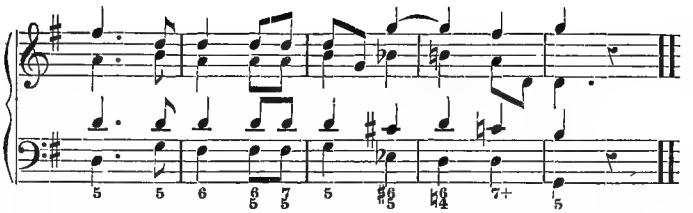
No. 74. EXERCISE ON THE HALF-CADENCES.





No. 75. A Melody.





N. B.—Here, again, we would advise the pupil to transpose the foregoing exercises into several keys; and, after looking at each formula of half-cadence, and practising it separately, to make a whole of the different instances. Not to repeat tediously the same direction, we urge it as a great advantage in point of rapid improvement, whenever every matter has been seriously thought of and understood.

APPENDIX G.

MODULATIONS.

A MUSICAL composition is grounded on a certain scale, or key, ascertained by the signature at the beginning. This is called the principal scale, or key, in contradistinction to others, which may occasionally be introduced; but a troublesome monotony would ensue, if the same key were carried out through the whole piece, from the beginning to the end. Therefore, in order to break this sameness of scale, new keys are employed, whose effect is to keep, for a while, the principal key out of sight, by placing themselves in its stead. The introduction of a new key is technically called a *modulation*. Modulating, then, is "to pass from the original key into another, which is foreign to it."

Of the keys thus resorted to, some are relative to the principal key, others not, which, for that reason, are called *remote keys*.

A key is relative to the principal one, when it has the same number of accidentals, or one more or less.

A remote key is that which differs from the principal by two or more accidentals. Hence, two kinds of modulations—Relative and Remote.

§ 1. RELATIVE MODULATIONS.

The relative modulations are the most obvious in a musical composition. There are whole quartettes and symphonies by Haydn and Mozart, in which no other modulations are used but those in the relative keys. Rossini—the melodious Rossini—in the greater part of his airs, duets, and trios, and in several of his most effective choruses, confines himself to the relative keys. There is one of which he seems particularly fond, and in which he has excelled, which might be styled the Rossinian modulation, namely: the modulation from the principal key up to the minor

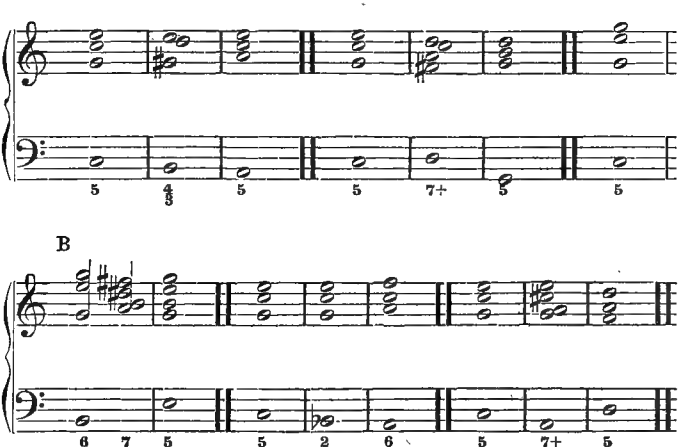
key of the third degree. In this he has concluded numbers of the finest and most graceful periods. The celebrated Handel has built his mightiest effects with the relative keys; so that the occurrence of a remote modulation is, in his works, worthy of remark.

To modulate into a relative key, the dominant seventh of that key is made use of, since it is the decisive sign of its own key. We hardly need say that it is immaterial whether it be inverted or not.

Let us take an example of a relative key. Let *c* be the principal key. Its relatives are *a* minor, with the same signature; next, *g*, with *f*♯, and its minor, *e*. As we have no accident to suppress in the principal key, we add *b*♭ to it, which is the same thing as if we suppressed one sharp, in a scale with sharps. This proceeding gives us the key of *f*, and its minor, *d*, as relatives to *c*, next to *g* and *e*.

Recapitulation.—*C*, principal key; relatives, *a*, *g*, *e*, *f*, *d*, of which three are minor, and two major.

No. 76. Example of Relative Modulation.



As can be perceived from the example, the dominant seventh of these relatives have sometimes three, sometimes two, or one tone

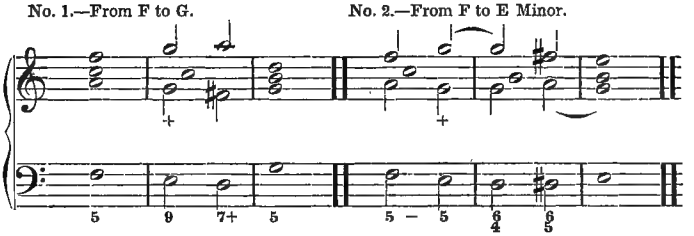
in common with the tonic chord of the principal key. The minor key, *e*, alone, has not any tone in common with it. We have, then, called another chord into action, which gives us some connective tone; and for that purpose, at B we have used the chord, *e*, *g*, *b*, as mediator between the tonics, *c* and *e*. About this mediate chord we will say more, when we develope the remote modulations.

It is to be remarked here, that some of these keys, although being nearly related to the principal key, are not so to themselves. So, in the list above given, the keys, *g*, *e* (one sharp), are not relative with the keys, *f*, *d* (one flat), as differing from each other by more than one accidental. Thus, when we are to modulate either from *g* or *e* to *f* or *d*, and *vice versa*, generally an intermediate chord must be placed between the key we intend to leave, and the dominant seventh of that into which we wish to pass. The one most appropriate to such a purpose, is the tonic chord of the principal key, or some other connected with it. We will mark this chord thus +, whenever used as a transition chord between any key and the dominant seventh of the following:

RELATIVE KEYS OF THE KEY OF C.

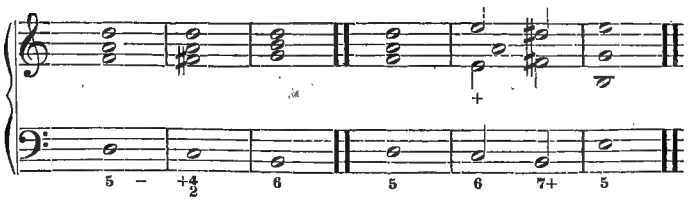
No. 1.—From F to G.

No. 2.—From F to E Minor.

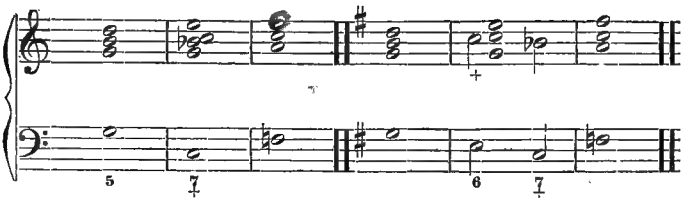


No. 3.—From D Minor to G Major.

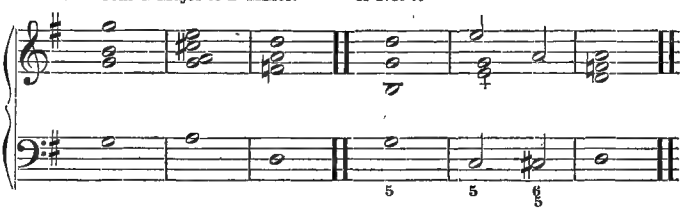
No. 4.—From D to E Minor.



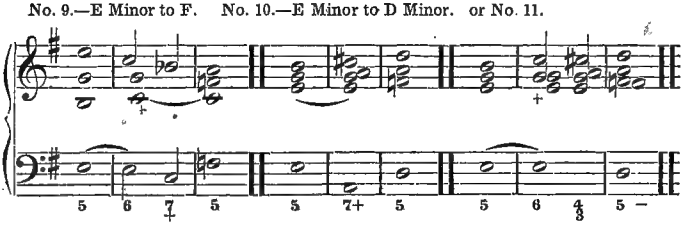
No. 5.—From G Major to F Major. or No. 6.



No. 7.—From G Major to D Minor. or No. 7.



No. 9.—E Minor to F. No. 10.—E Minor to D Minor. or No. 11.

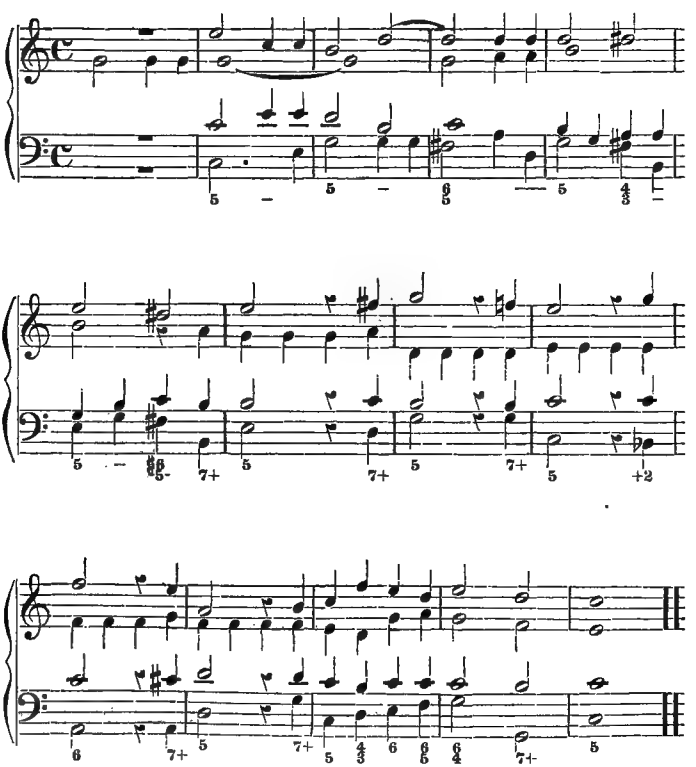


As we may see from these examples, the tonic chord of the principal key presents itself, most of the time, as the mediator between these different keys. No. 2 has two intermediate chords, because *c*, *e*, *g*, the first, gives no mutual tone to the dominant seventh of the key, *e* minor; therefore, the chord, *g*, *b*, *d*, has been used to secure that mutual tone. In No. 3, the key, *d* minor, gives three consecutive tones to the following dominant seventh of *g* major. If we consider that *d* minor is a relative key to *g* minor, we perceive that the dominant seventh of the latter key is well adapted to modulate from *d* minor to *g* major, without any other mediator, since after every dominant seventh we are free to pass either into the major or minor key.

By the same reason, we are authorised, in Nos. 7 and 10, to go from *g* major to *d* minor, and from *e* minor to *d* minor, with a single mediator—the dominant seventh.

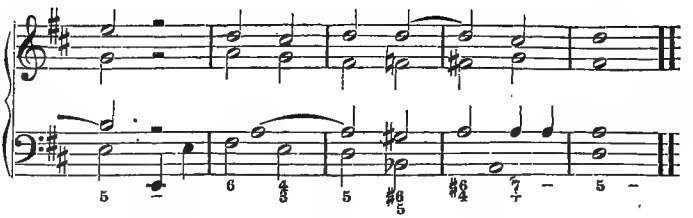
In No. 5, we are justified in passing from the tonic, *g* major, to the dominant seventh of *f* (one flat), by the consideration that often a tonic may be considered as a dominant seventh, which may resolve into another dominant. Then, in the present instance of No. 5, we pass from major *g* to the dominant seventh of the major key, *f*. The other Nos. require no particular observation; and we shall put the preceding remarks in practice.

No. 77. Exercises on Relative Modulations.



No. 78.

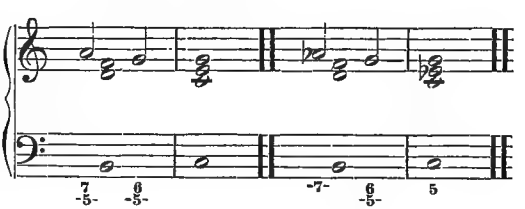
No. 79.



The preceding modulations have been performed by using only the dominant sevenths; but we can obtain the same result by the nonachord and the diminished triad, both arising from the dominant seventh. It is evident, upon considering the origin of these chords, that they are endowed with the faculty of modulating. Notwithstanding their relationship with the dominant seventh, the nonachords are seldom used to settle a new key, and when used, it must be with discernment, *i. e.*, the major nonachord must be used, when a major key is wanted; and when we intend to touch a minor key, the minor nonachord should be resorted to.

The reason why the nonachords are less suited than the dominant chord to perform the modulations is, partly, because of their being overloaded with tones. This diminished triad is, in this respect, more convenient to modulate with.

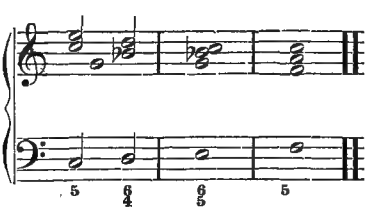
The seventh, derived from the major nonachord, and the diminished seventh, furnish us with means of modulation, each in their respective modes. It will be advisable to resolve them into the dominant chord, before getting the new key, as,



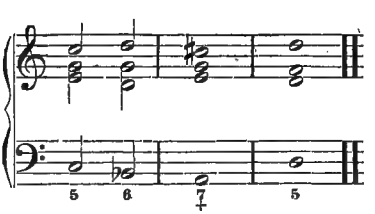
Occasionally, we may use the dominant triad for our modulations; but it lacks that decision which the dominant seventh and the nonachord possess. This lack of decision is owing to its

adaptability to the the major and minor mode. For instance, in *g* major, the dominant triad, *d*, *f*♯, *a*, reminds us of the keys, *g* major and *g* minor; and the tonic chord following it may alone remove all uncertainty of key.

Finally, the minor triads, in many instances, can likewise assist us in modulating. They enjoy the peculiarity of effacing entirely the original key. But if we design to confine ourselves to the relative modulations, we must take care not to touch any minor triad, which might lead us to remote keys. Thus, in *c* major, we must avoid the minor triads, *c* minor, and *f* minor. The former might lead us into *e*♭ major, *b*♭ major, or *g* minor; the latter into *a*♭ major, *e*♭ major, or *c* minor. But we can change the dominant triad into a minor triad, and pass into a key of which the minor triad is relative. Thus, in the case of *c* major, by changing *g*, *b*, *d*, into *g*, *b*♭, *d*, we are at liberty to modulate into *f* major and *d* minor, which stand in near relation both to *g* minor, and to the principal key, *c* major, as,

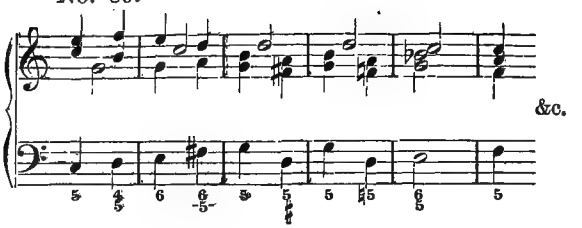


or



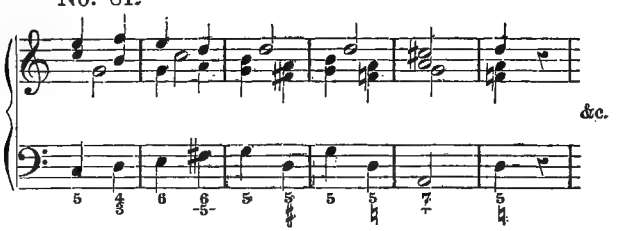
This minor triad may afford us a proper opportunity of moving from one key to others not related to each other, but related to the principal key; for example, in the key of *c*, from *g* major to *f* major, thus:

No. 80.



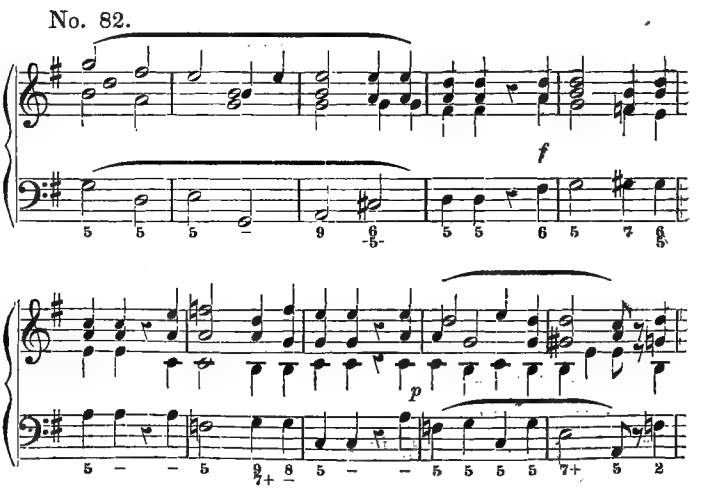
Or to *d* minor, in the same key of *c*, thus:

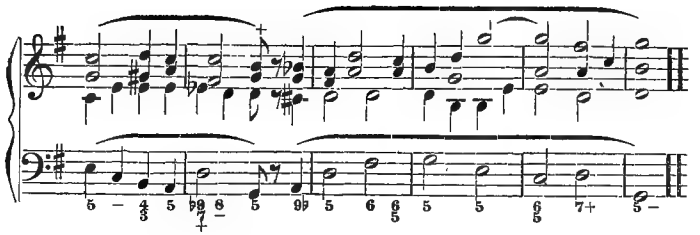
No. 81.



We will now close the relative modulations, by two illustrations of the subject. One affords some instances of modulations by the nonachords. The other is the "Wedding March," from the *Iphigenia in Aulis*, by Gluck.

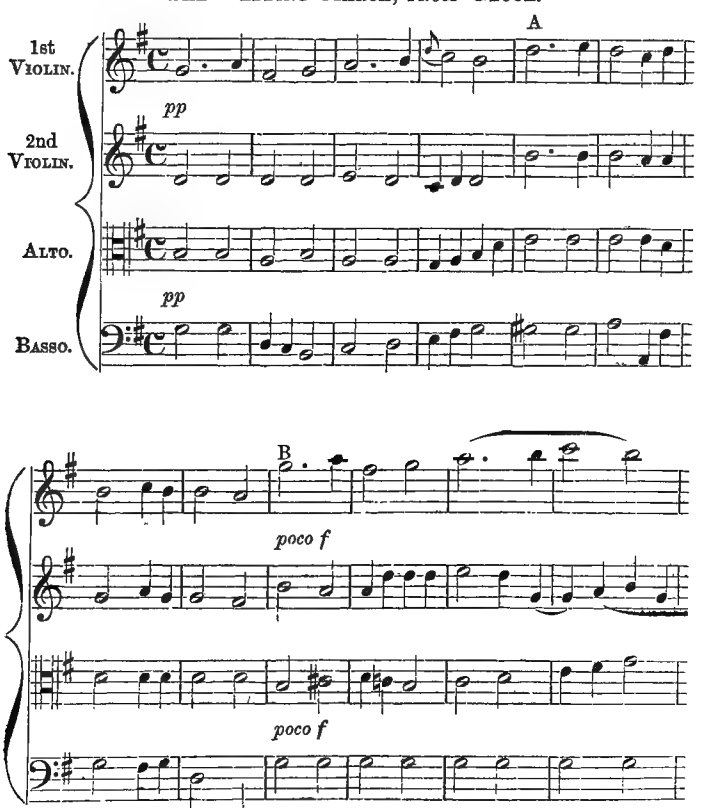
No. 82.

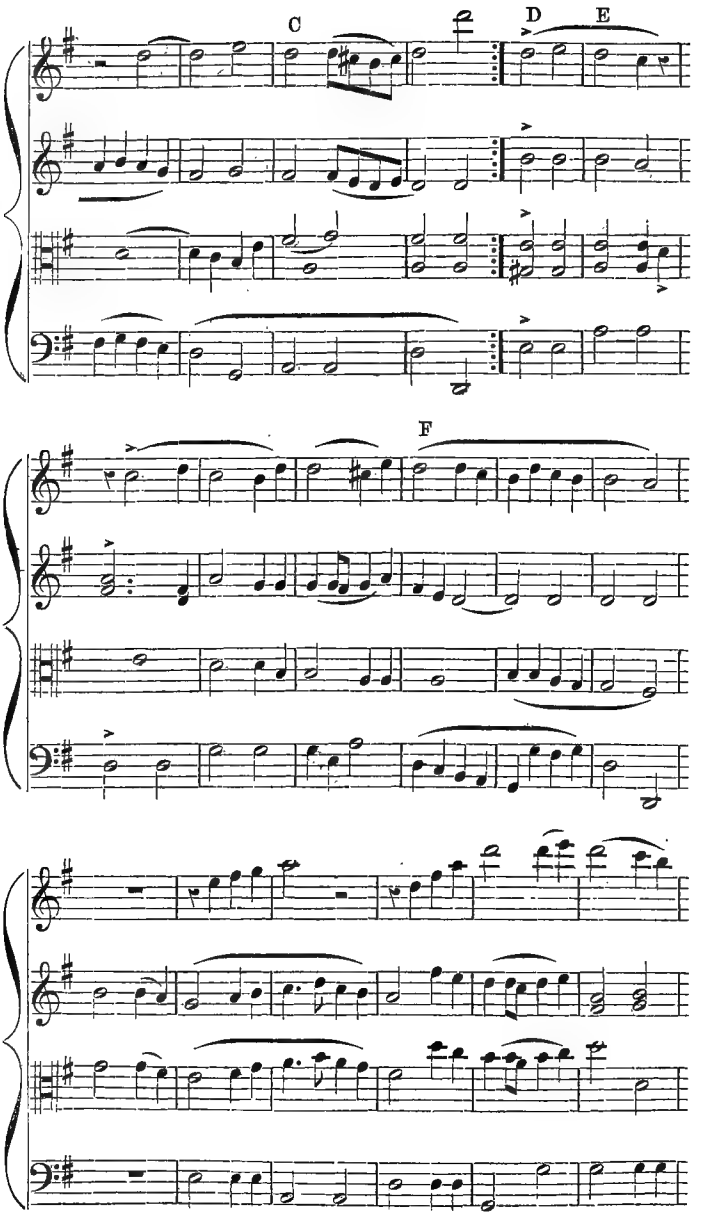


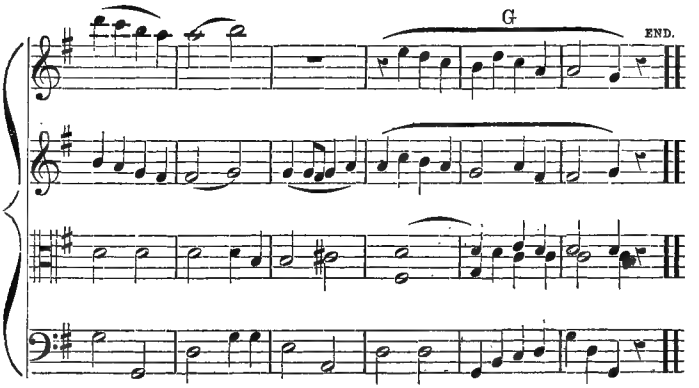


In this example, the nonachords resolve into the dominant seventh, before touching the new key except at +.

THE WEDDING MARCH, FROM GLUCK.




C
D
E
F



This piece is admirable for its simplicity, and remarkably fit for the circumstance in which it is performed. Besides, there is in its smooth and quiet motion something breathing of early music, making the listener's mind feel the happiness the enamored couple must have enjoyed upon the occasion.

The student should notice the digressions into *a* minor and *d* major, at A and B; after which, at C, the harmony moves into *d* major, in which the composer concludes the first part of his composition. This affords an instance of what is called a *transition; i. e.*, a modulation by which the writer ends an important part of a piece of music in a new key.

At the beginning of the second part (D), Gluck again makes two small modulations, one into *a* minor (E) and the other into *d* major (F); and finally, (G) a formula of cadence in the principal key is introduced, and the composition brought to an end. This is a fine specimen of relative modulations. It may be seen here how the simplest melodies are made interesting by a skilful blending of these keys.

We cannot give up this subject without setting forth a last observation, which should always be kept in view: that is, not to multiply modulations, so as "to take away the unity and firmness of the whole structure;" in other words, we must use modulations moderately, and allow the principal key to be predominant, whatever may be the length of the composition.

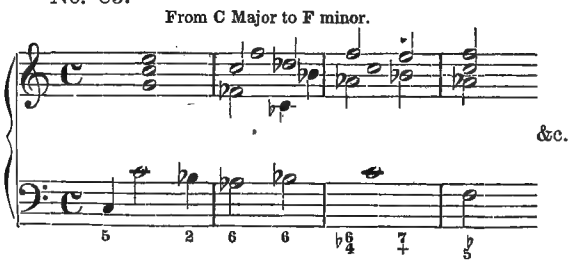
§ 2. Remote Modulations.

From the definition already given of Remote Modulations, it ensues that a key is by so much more remote from the principal key, as it disagrees with it in its tones. A *remote* modulation may appear, at the first reading, to imply something difficult to be brought about; yet it is not always so. A remote key is by no means a great deal harder to be got than a relative one. We will lay down here some directions, which will enable the student to bring about the most used of those keys. They are many in number; and were we able to sum them up here, we could not boast of having given all the possible means of modulating; for many others may still be discovered by a man of genius; the dominion of the art of music being boundless like the canopy of Heaven, in which the astronomers, from time to time, discover some unsuspected star.

§ 1. The same dominant sevenths which have assisted us in performing the relative modulations, may likewise serve us for the purpose of modulating into the corresponding irrelative ones. For instance, in *c* major we can reach the keys, *f* minor and *g* minor, through the very same dominant sevenths which have led us to their corresponding major keys.

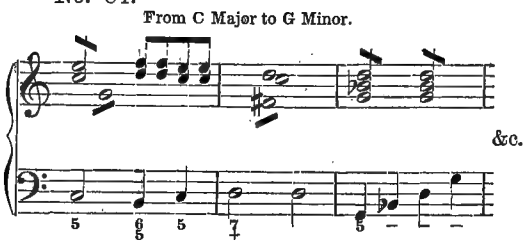
No. 83.

From C Major to F minor.



No. 84.

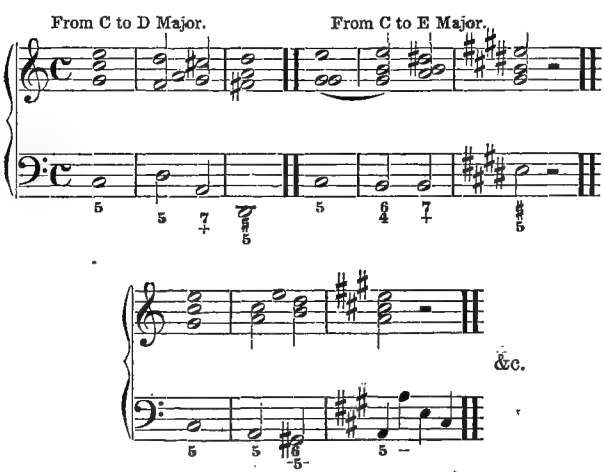
From C Major to G Minor.



Moreover, in every scale there are three minor triads. Then, if after the principal tonic we use these triads to serve us as connective chords for the dominant seventh of their respective major ones, we gain three remote major keys. The minor triads in the key of *c* are *d f a—e g b—a c e*. Their corresponding major ones are *d f♯ a—e g♯ b—a c♯ e*.

No. 85. EXAMPLE.

From C to D Major. From C to E Major.



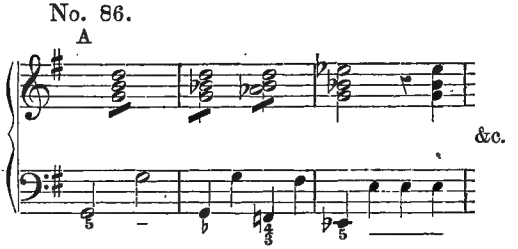
Thus, every major scale gives us five modulations into [illegible] keys (three major, and two minor), which are based on the following degrees: the major on the second, third, and sixth degrees; the minor on the fourth and fifth degrees. We perform these

modulations with the same transition chords which have enabled us to modulate into their corresponding relative keys.

The minor scale gives no keys different from the major.

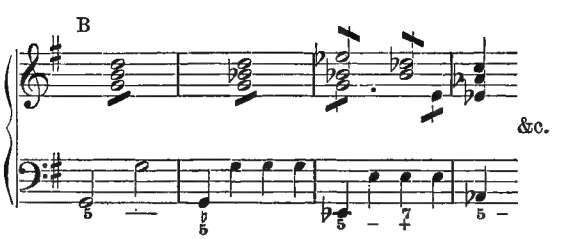
§ 2. The alteration which the third of a chord may undergo, when changed from major to minor, or from minor to major, can lead us to keys more or less distant. This proceeding is frequently followed by Haydn, Mozart, Beethoven, Meyerbeer, and other celebrated composers. For instance, to modulate from *g* major to *e♭* major, we change the major triad, *g*, *b*, *d*, into *g*, *b♭*, *d*, which reminds us immediately of all its relatives; and we perform the said modulation thus:

No. 86.



We might proceed still farther, as,

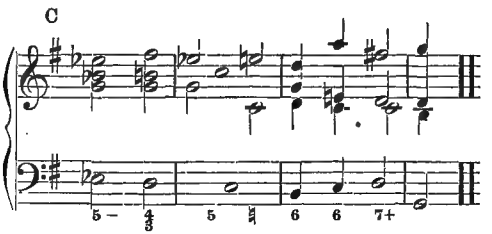
No. 87.



The minor triad, *g*, *b♭*, *d*, through its relative, *e♭*, *g*, *b♭*, reminds us of *a♭*, to which we are led by changing this triad, *e♭*, *g*, *b♭*, into the dominant seventh of the key, *a♭*, major.

Now, if we intend to return to the key, *g* major, from the key, *e♭*, we will have to follow the contrary course; that is, to change

some minor triad into its major. Here for instance, the triad, *c* minor, is nearly related to the key, *e♭*. Let us then choose this triad, and change it into *c* major. Our return to *g* major will be surely accomplished in the following way:

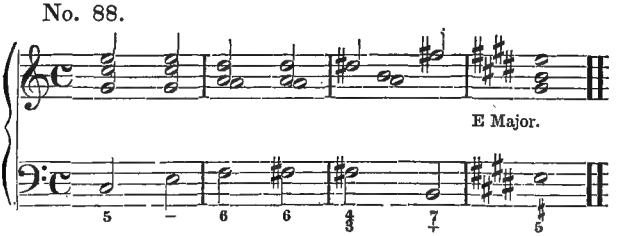


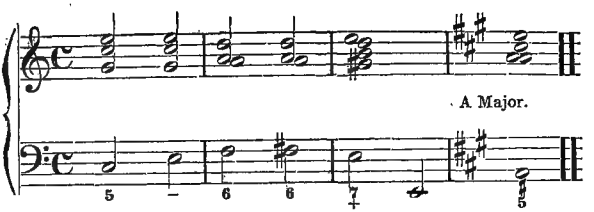
We must be careful, when we affect such changes in the third of a chord, to place the accidentals in that voice which can take them most conveniently; that is, in that voice which had formerly the same tones, without alteration. Thus, in the examples, A and B, we have given *b♭* to the alto, which had previously *b♮*; and in the example, C, we have given *e♮* to the treble, which had *e♭*. By strictly adhering to this rule, we shall avoid cross relations.

In the preceding examples, we have started from natural keys, and gone to those with flats. We are now to follow an opposite direction; *i. e.*, from natural we intend to go to keys with sharps; and as we changed major thirds into minor ones, so now we shall change minor into major thirds. But here the pupil must bear in mind that in every scale there are three minor triads, those on the second, third, and sixth degrees. He must avail himself on these triads, which, changed into major, will help him to modulate into more or less remote keys. From *c* major

The minor triad of the second degree may lead to *e* major and *a* major, thus:

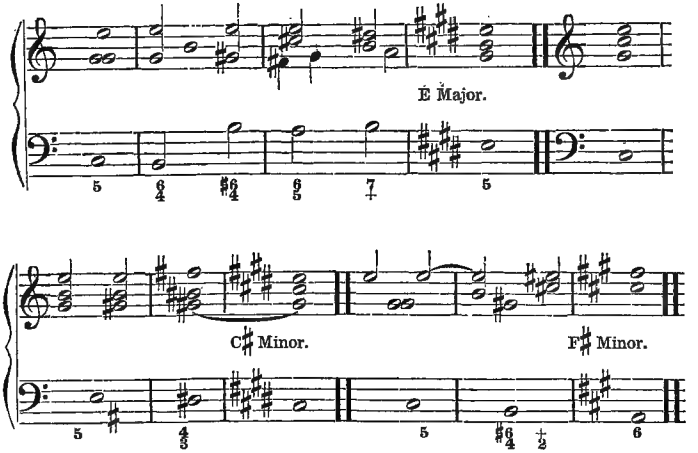
No. 88.





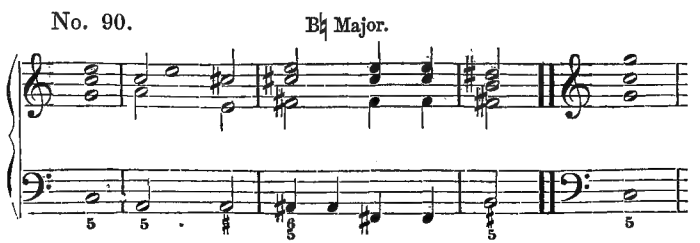
The Minor Triad on the third degree to major *e*, minor *c*♯, and minor *f*♯.

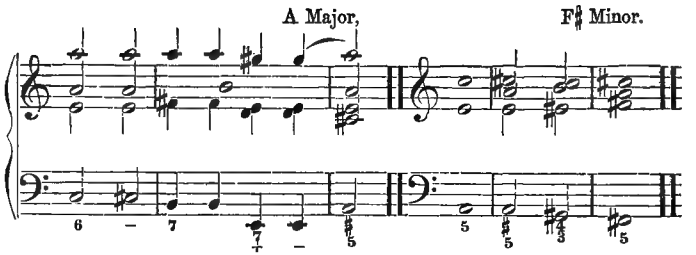
No. 89.



The minor Triad on the sixth degree to *b* major, *a* major, and *f* minor.

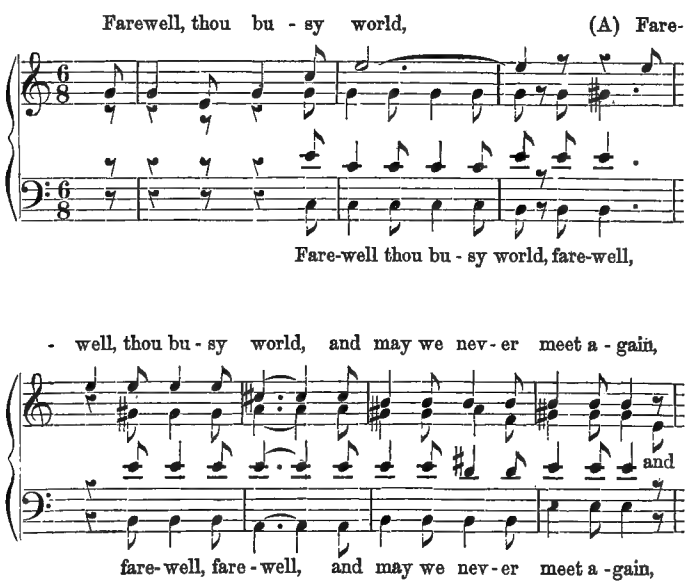
No. 90.





We have here introduced such keys as have their dominant seventh connected with some preceding triad. Nevertheless, in spite of this connection, such modulations as are given here, require in practice a more extensive development. The following is a specimen of their treatment:

No. 91.



and may we nev - er meet a - gain.

may . . . . . we nev - er meet a - gain.

and may we nev - er meet a - gain.

Here the alto part being stationary on $g\sharp$ (A) for several measures, prepares the ear for the coming key, and the major triad, *a*, $c\sharp$, *e*, leads it most conveniently to the definitive key of *e* major. At the sign +, the minor triad *a*, $c\natural$, *e*, calls us back again to the principal key of *c*, in which the final cadence is performed.

But the best course to take, in order to make such modulations, is previously to settle the dominant of the new key, as·

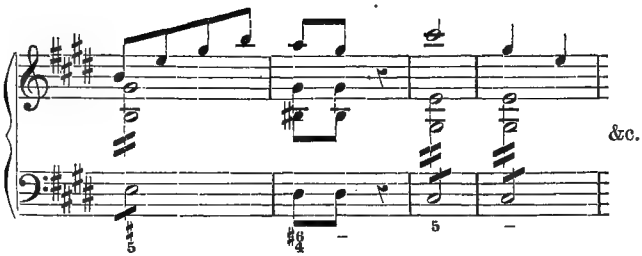
No. 92.

ALLEGRO.

1. AND 2. VIOLINS.

VIOLON. D. B.

p *Cres.* *f* *ff*



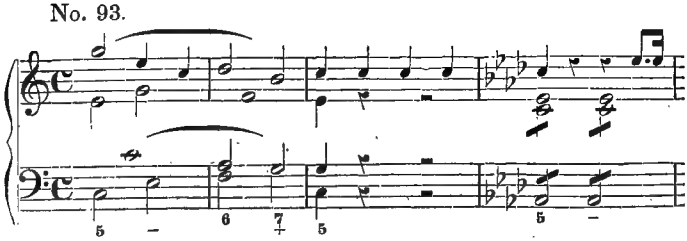
This fragment is an extract of an instrumental composition reduced to two violins, violoncello, and double bass. It exemplifies pretty well our meaning. Before setting forth the new key with a new melodic design, the dominant is strongly and firmly decided, so as to satisfy the demands of the ear. This method of going to remote keys is very common in instrumental music, such as sonatas, quartettes, quintettes, symphonies, &c., &c. The instrumental compositons of Haydn, Mozart, Beethoven, Hummel, and Mendelssohn, abound with such modulations.

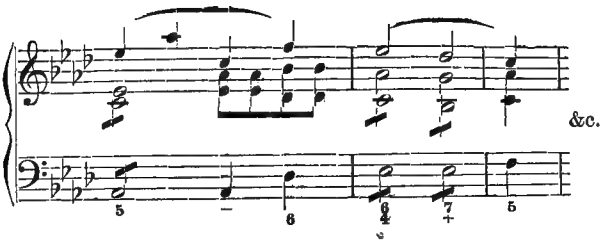
§ 3. The cadences and half-cadences, also, furnish us with means of modulations.

After every final cadence we are free to keep on any tone of the tonic, to make it the preparation for a new key.

1st. By keeping on the fundamental, and making it the major third of a new tonic, we are supplied with a modulation into the key a major third downward from the preceding one. Thus, from *c* major we modulate into *ab* major, thus:

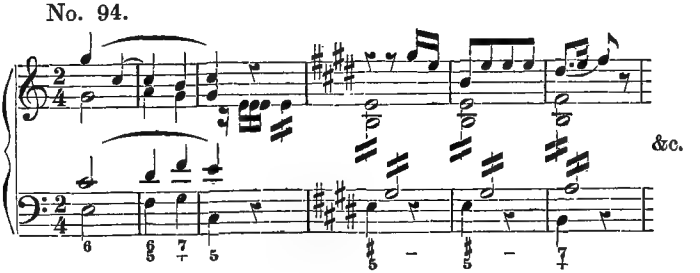
No. 93.





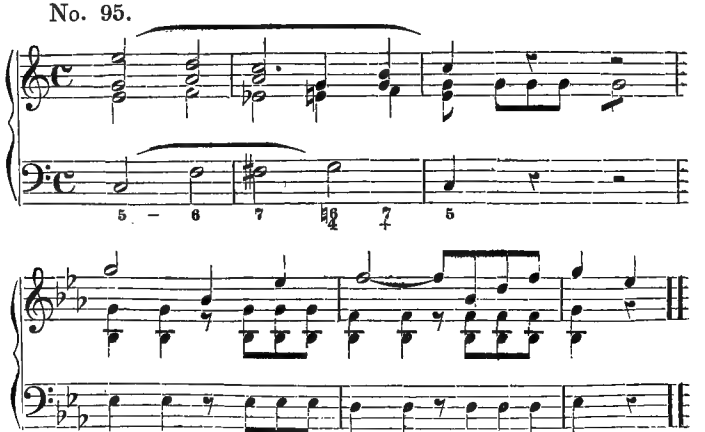
2nd. By keeping on the third and making it the fundamental of a new tonic, we modulate into the key, a major third above the preceding one, thus:

No. 94.



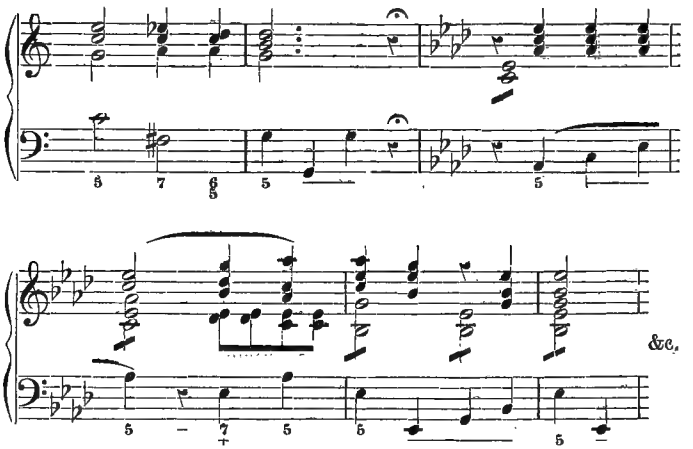
3rd. By keeping on the fifth, and making it the major third of a new tonic, we modulate into a new key a minor third above the preceding one, thus:

No. 95.



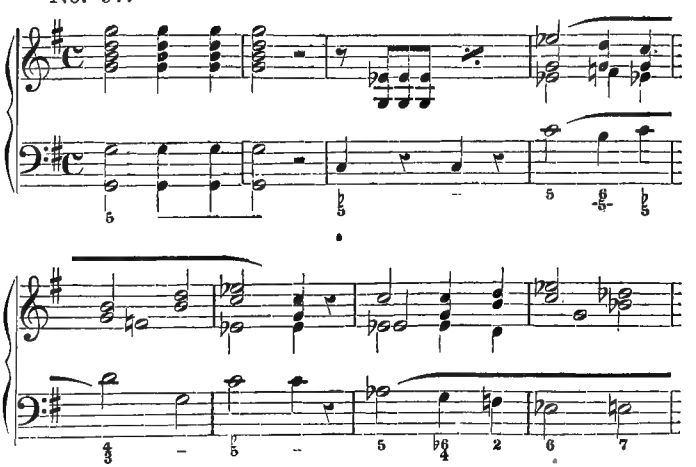
4th. After a repose on the dominant, we may establish a new key on the minor second above this dominant, thus:

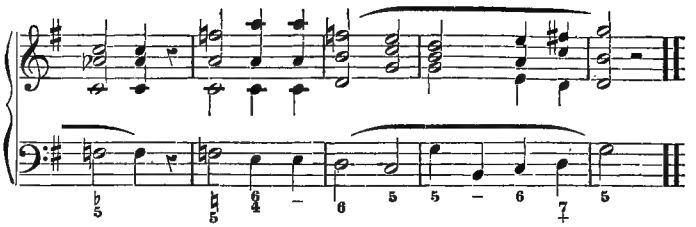
No. 96.



5th. After every major tonic we may get the fifth downward as the fundamental of a new minor key, thus:

No. 97.

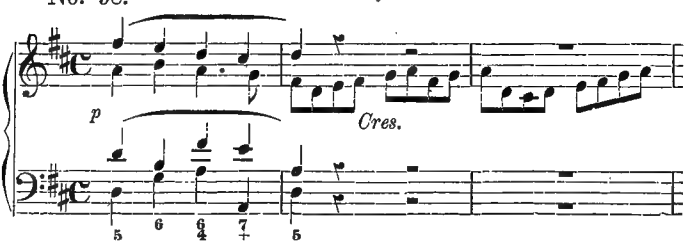


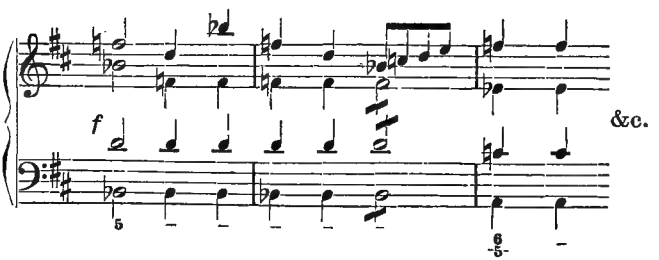


This modulation is natural, and frequently used. At the eighth measure we use a proceeding already pointed out. We change the preceding chord minor into major, in order to return back to the key *g* major, in which the final cadence is concluded.

6th. After every tonic, we may start from one of its tones, and by a melodic design, or octave passage, reach any key we please, as:

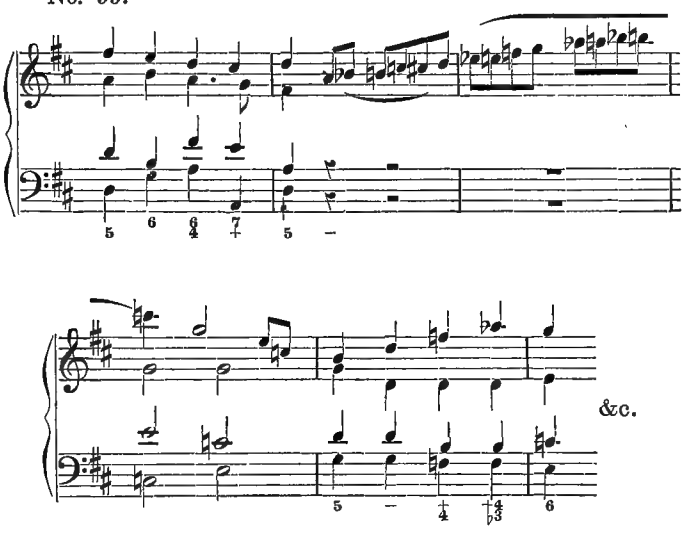
No. 98.





7th. The chromatic runs are frequently used to introduce remote modulations. In such a case every tone of the tonic we leave may serve as a starting point to get the new key, as:

No. 99.

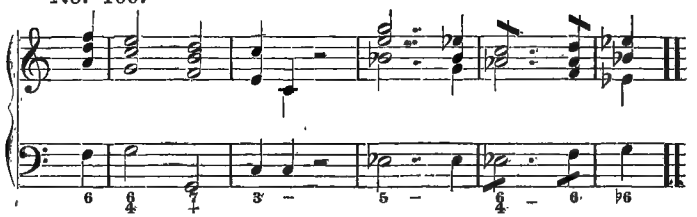


From *d* major we are led, by chromatic steps, into *c* major, in which all the parts seize upon the new tonic, and complete the modulation. But this repose on *c* is quite arbitrary. We might as well have taken rest at *e♭*, in the beginning of the third measure, or at *a♭*, at the middle of the same measure, but not before *e♭*; for the run would have been too short: it is proper to settle the new key at the beginning of a measure, or at least, at the accented part of it. It is advisable, moreover, to pay attention to the motion of the musical composition. In a slow movement, four or five chromatic steps may be enough to determine the key; on the contrary, the quicker the motion, the longer ought to be the chromatic run.

8th. The musical rests can become means of modulations,

without retaining any tone to serve us as a link between the abandoned key and the new one, as:

No. 100.



Here we have a full and perfect cadence. The rhythm only leads us to expect a continuation; and immediately we continue, in a foreign key. By what right? Because this continuation is a phrase by itself, as it were; a new piece which takes up the thread of the previous phrase at a different place, and perhaps in a different sense.

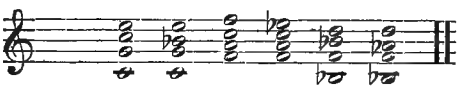
We ought to remark, with regard to the modulations in this section, that they are generally introduced by the accompanying parts, after which they are taken up by the singers or choruses. We have exemplified them here in this way. Nevertheless, such occurrences may happen, as to be introduced by the voices themselves. There is not any absolute rule on this point.

Observation.—Since in Nos. 1, 2, and 3, the stationary tone is preceded by a full cadence, and consequently, the musical period finished, no transition is required. The tone retained can be the fundamental, third, and fifth of a tonic triad, and the fundamental tone, third, fifth, and seventh of any seventh or nonachord, to which it is inherent. Again, in Nos. 6 and 7, the tones to which we have been led, beside being the fundamental, third, or fifth of a tonic triad, can be a part of a dominant seventh or nonachord. Nevertheless, those exemplified in this paragraph are the more usual, and deserve a special practice on the part of the student.

§ 4. Passages of Dominant Sevenths.

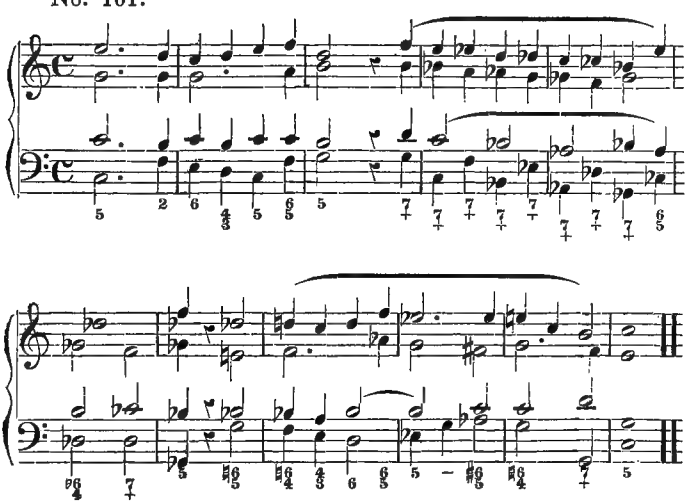
We can consider the dominant seventh as a major triad with an

additional minor seventh, and change every triad into a dominant chord, as:



But, since every dominant seventh already contains within itself a triad, we are free to reject the triad—which follows the dominant seventh in the above example—and to have the dominant sevenths following each other immediately, as:

No. 101.

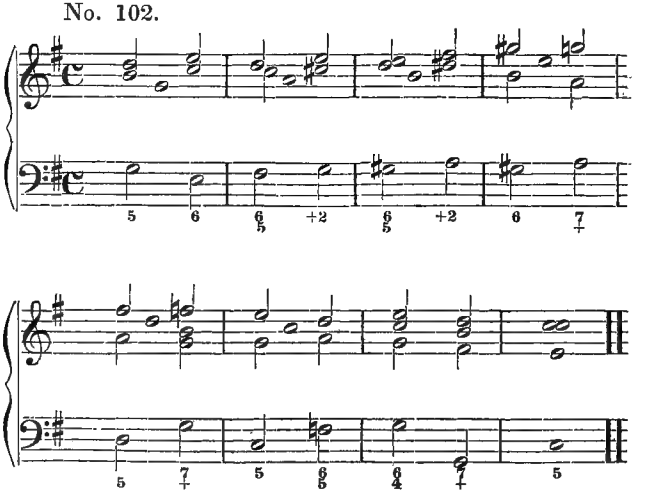


This example affords us a specimen of remote modulations, as given by the passages of dominant chords. The succession begins at the close of the third bar, and we see in it every tone follow the regular progression, with the exception of the third, which descends a chromatic step, and becomes the seventh of the following chord.

We confined the above passage to major *g♭*, because, if continued, it would have led us to tonics encumbered with signatures, or to avoid this encumbrance, it would force us to call on enharmonic changes, which we now intend to avoid; as it is our design to treat separately the enharmonic modulations.

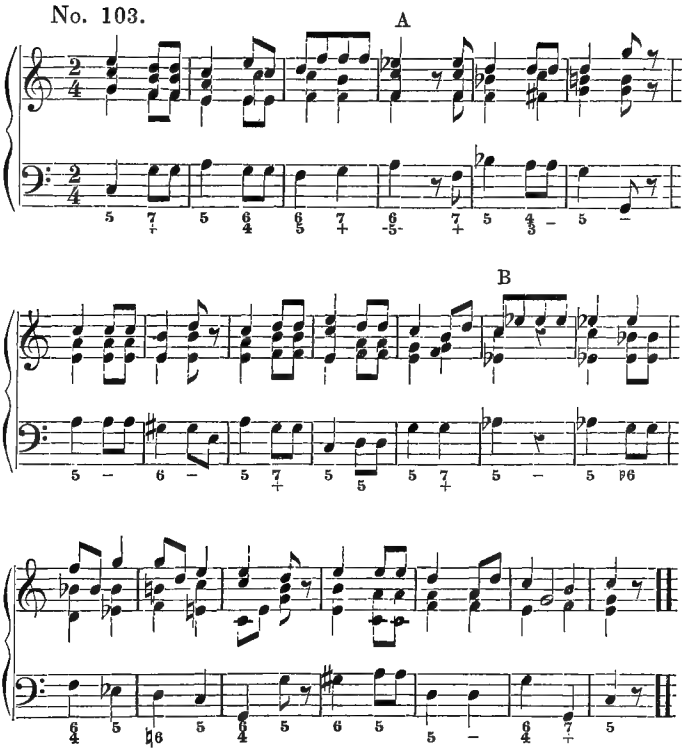
We will now lead these passages in an opposite direction. In the foregoing example, by changing the resolution of the third, we get a new dominant seventh and a new key, that of the subdominant; and as the subdominant has been successively changed into a dominant seventh, we have gained a new flat at every resolution. Our object now is to give the third its usual ascending motion, and to elevate the seventh by a chromatic step; the fundamental tone, instead of progressing downward a fifth, has to move up a full step, the fifth is retained stationary on the following chord, and the seventh moves up by a chromatic step. At this time, too, we proceed from a dominant seventh to a dominant seventh; but the tonic of the second seventh is the fundamental of the first, and every new dominant seventh gives a new sharp, as:

No. 102.



Lastly, we proceed to some other modulations, given by the dominant seventh, deviating from its usual course of resolution, as:

No. 103.



At A, the dominant seventh resolves to *f*, *a*, *c*, *e♭*, which is the dominant seventh to the key of *b♭* major. We might as well have led it to *a*, *c*, *e♭*, or to *a*, *c*, *f*. In these resolutions, the fundamental moves up to *a*, the third and the fifth both to *c*, and the seventh stretches over to the next chord. In the case of *a*, *c*, *e♭*, it descends a step to *e♭*.

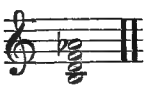
At B, the dominant seventh resolves to *a♭*, *c*, *e♭*. Here, all the tones follow their usual course, except the fundamental, which goes up a minor second, to *a♭*, deviating from its downward motion.

Properly speaking, the modulations in this paragraph are nothing else than interrupted cadences; but, as they lead to foreign keys, we had to place them under the head of modulations.

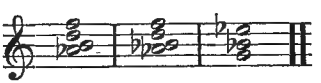
§ 5. The Diminished Seventh.

Our design, here, is to give a full account of the diminished seventh, as far as it helps to carry out remote modulations. In another place, in the enharmonic modulations, we shall give a different view of it.

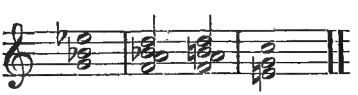
We have already remarked, on page 41, that this chord may be used both in the major and minor modes. Thus, the diminished seventh



belongs to *c* major, as well as to *c* minor. Every diminished seventh, by depressing the leading note by a chromatic step, may be changed into the dominant seventh of the parallel major key. Then, in *c* major, if we lower *b* a chromatic step in the diminished seventh *b, d, f, a♭*, it becomes *b♭, d, f, a♭*, the dominant seventh of major *e♭*. Thus, from *c* major we may suddenly pass to *e♭* major; as,



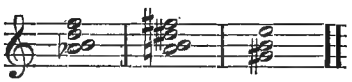
But since the diminished seventh can be converted into a dominant seventh, by depressing the leading note, it follows that by elevating the fundamental of the dominant seventh, by a chromatic step, we convert it into a diminished seventh. Thus, in the present instance, such a change enables us to return to *c* major; as,



Let us now enter into some other interesting combinations of this chord.

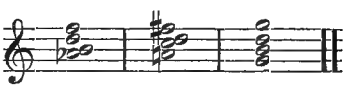
1st. The leading tone being unaltered, if we elevate a half step (chromatic or diatonic, according as the case may be,) the three other notes of the diminished seventh, we convert it into a

dominant seventh, whose tonic is a third above the preceding one. Example:



We go from *c* major to *e* major.

2d. The third being unaltered, if we elevate the leading tone, the fifth and seventh, a half step (chromatic or diatonic), we obtain a dominant seventh, whose tonic shall be a fourth below, or a fifth above the preceding one; as:

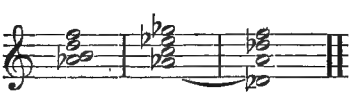


From major *c*, or major *e♭*, we go to major *g*.

3d. The fifth being unaltered, if we elevate the leading note, the third and seventh, a half step, we gain a dominant seventh, whose tonic is a whole step below the former; as,

We pass from major *c* to major *b♭*.

4th. The seventh being unaltered, if we elevate the three other tones a half step, we obtain a dominant seventh, whose tonic shall be a half step above the preceding one; as,



From major *c* we go to *d♭* major.

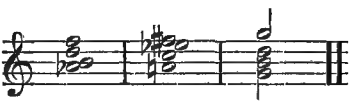
In the foregoing combinations, we have regularly three tones moving up a half step, while alternately another remains stationary. In the following combination, we have two alternatives.

First Alternative. All the tones ascend, but in different degrees; the seventh three times, a half step; while the three others ascend, sometimes a whole step, or a half step, and sometimes a diminished third.

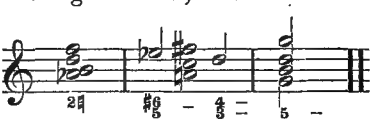
1st. The seventh ascends a half step, and the three other tones a whole step; as,

From *c* major or minor we go to *d* major.

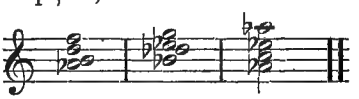
2d. All the parts ascend a half step, and lead from *e* major or minor to *g* major.



In this example, the diminished seventh is transformed into another diminished seventh, instead of changing into a dominant seventh. There is also a slight blemish in the resolution, in which *e♭*, and *d* in the tenor part, step by real fifths with *a* and *g* of the base. Though these consecutives are admitted by some theorists, as the first fifth comes from a dissonant chord, yet we believe it is much better to avoid it, which is easily done, by causing the diminished seventh to resolve to the dominant seventh of the same fundamental, before reaching the tonic; thus:



3d. The seventh ascends a whole step, the leading note a diminished third (or enharmonic step), the third a half step, and the fifth a whole step; as,



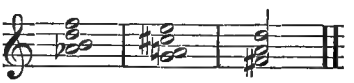
from major or minor *c* to major *a♭*.

4th. The seventh ascends a whole step, the leading note a half step, and the third and fifth a whole step; as,

from major or minor *c* to *f* major or minor.

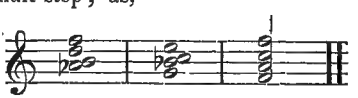
Second Alternative. All the tones descend; the seventh three times a half step, and once a whole step; the other tones sometimes a whole step, at other times a half step.

1st. The seventh a half step, the leading note a whole step, the third and fifth a half step; as,



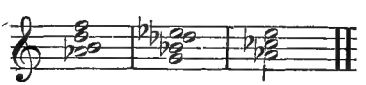
from major or minor *c* to *d* major.

2d. The seventh a half step, the third a whole step, the leading note and fifth a half step; as,



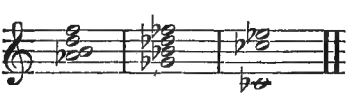
from major or minor *c* to *f* major or minor.

3d. The seventh a half step, the leading note and third a half step, the fifth a whole step; as,



We go from major or minor *c* to *a♭* minor.

4th. The seventh a whole step, the other tones a half step; as,

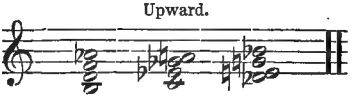


from major or minor *c* to major *c♭*.

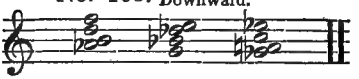
Lastly, we can use the diminished seventh in passages or sequences, as we did the dominant seventh. They may enable us to run upward and downward, through all the semitones of the scale. Nevertheless, it is not usual to carry such successions beyond three or four chromatic steps. These sequences are carried out with flats, when it is intended to reach some flat-tonic. Example:

No. 104.

Upward.

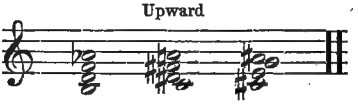


No. 105. Downward.

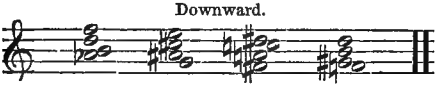


They may be carried out with sharps, if some sharp-tonic is aimed at; as,

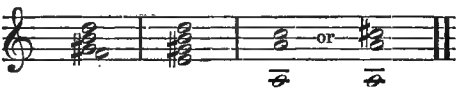
No. 106.
Upward



No. 107.
Downward.



In No. 104 we are led to the key of *f* major or minor; in No. 105, to the key of *b♭* major or minor; in No. 106, to *b* major or minor; and in No. 107, to *a* major or minor. Although the diminished seventh leads to the tonic, yet the common practice is to change the last diminished seventh into the dominant of the same fundamental; which is easily effected, by lowering the seventh a half step. Thus, for example, the last seventh of No. 107 can be changed into the dominant of the keys minor or major *a*.



In these sequences, all the parts ascend or descend by half steps, so that we are enabled to ascertain the regularity of each part, by only glancing at the succession of the semitones.

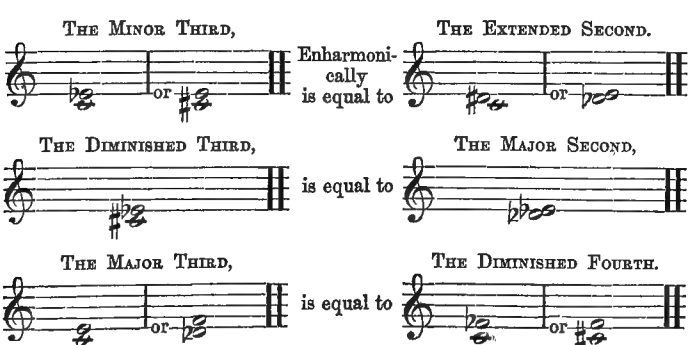
There is nothing more to be said on the subject of remote modulations. We are conscious of having omitted nothing that is necessary to the thorough training of the student. Finally, we have to remark, that the modulations arising from sequences of diminished sevenths, belong particularly to the instrumental department; and, first of all, to piano music. If adapted to singing, they require, to be tolerably brought about, first rate singers, as they demand the greatest acumen in the sense of hearing, in order to

keep firmly to the pitch of the half-step progressing parts. Of course, they are but seldom employed in choruses, except in the high combinations of the stage music of the grand opera, in which all the requisites of large performances are found abundantly. It is the province of the composer to know well the ability of those who are to be entrusted with the care of performing, his compositions.

Enharmonic Modulations.

Sounds, which are identical in pitch, but placed on different degrees, are called *enharmonic.* Thus, *c*♯ and *d*♭ are considered as forming a uniform sound; that is, equal as to pitch, although placed on two different degrees. Mathematically, these tones are not identical; *c*♯ is somewhat higher than *d*♭. But here theorists have followed mathematicians, who, when they find in an operation a fractional number so small as to make but an unimportant difference, neglect it, and proceed as if they had obtained an exact result. Such is the case here. The difference in pitch between enharmonic sounds is so minute, that it is, indeed, to be disregarded; and by doing so, for a small difference of pitch, which is overlooked, remarkable advantages have been gained, both in the theoretical and practical departments of music. The word enharmonic is derived from the Greek, *enharmonikos*, the meaning of which is, *fitting*, *in accord*, or *harmony*.

According to these notions of enharmonic sounds, the following changes take place:



The Extended Third, is equal to The Perfect Fourth.

The Diminished Fourth, is equal to The Major Third.

The Perfect Fourth, is equal to The Extended Third.

The Sharp Fourth, is equal to The Diminished Fifth.

The Diminished Fifth, is equal to The Extended Fourth.

The Perfect Fifth, is equal to The Diminished Sixth.

The Extended Fifth, is equal to The Minor Sixth.

The Diminished Sixth, is equal to The Perfect Fifth.

The Minor Sixth, is equal to The Extended Fifth.

The Major Sixth, is equal to The Diminished Seventh.

The Extended Sixth, is equal to The Minor Seventh.

Of these enharmonic changes, the most used are those of the extended second, of the major sixth, and of the extended sixth; the first being changed into a minor third, in the enharmonic combinations of the diminished seventh; the second, becoming a diminished seventh, and the third being changed into a minor seventh in the transformations of the extended sixth. We have likewise mentioned, in the above list, the interval of the diminished third, so pleasing in melody, and, perhaps, improperly banished from harmonic uses. We had two reasons for doing so: first, because the diminished third is sometimes used enharmonically, and changed into a major second; second, because its inversion, the extended sixth, is frequently used in practice. Moreover, one of the greatest composers of the day, Rossini, notwithstanding the rule which prohibits the use of the diminished third in harmony, did not scruple to use it, and most happily, in his *Maometto Secondo*, in the overture to *La Gazza Ladra*, and in several other works. The mischievous Italian seems to have purposely mocked at the prohibition. So great an authority should be sufficient, in our opinion, to set aside, as an antiquated rule, the exclusion of the diminished third from harmony.

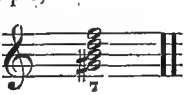
The two streams from which enharmonic changes flow most abundantly, are the diminished and dominant sevenths.

A. The Diminished Seventh.

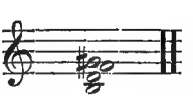
We have already, on page 108, given a treatise on this chord, when laying down the matter of remote modulations. We shall now finish up what has been partly done there.

The diminished seventh consists exclusively of minor thirds; hence, it follows that every inversion contains an extended second; and by changing alternately this second into a minor third, such inversion forms a new diminished seventh, affording the composer the means of getting three different keys.

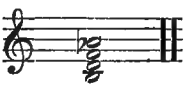
Let us take, for example, the diminished seventh:



The first inversion,

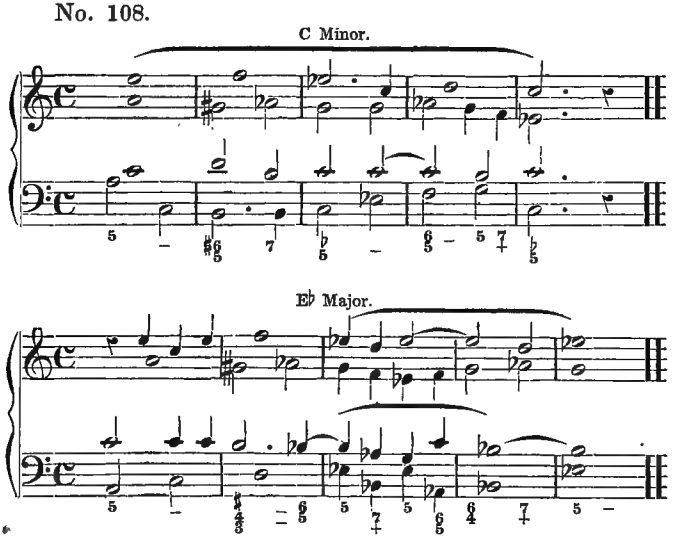


by the change of *g*♯ into *a*♭, becomes a new seventh,

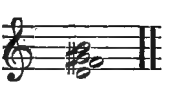


and enables us to modulate into *c* minor; and, as every diminished seventh is able to become a dominant seventh, by lowering the leading tone a half step, we are subsequently enabled to enter upon the key of *e*♭ major.

No. 108.



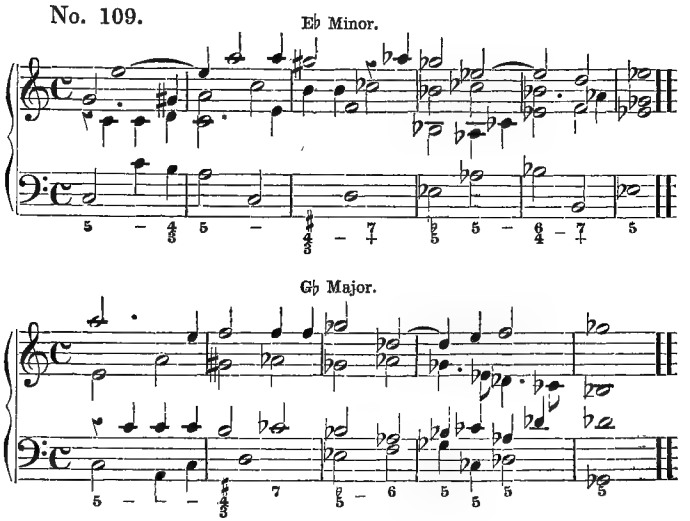
The second inversion,



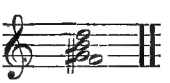
by the change of both *g*♯ into *a*♭, and of *b* into *c*♭, we gain the diminished seventh,

which affords us the modulation to *e♭* minor or major, and subsequently to the parallel key, *g♭* major.

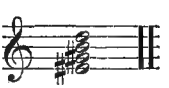
No. 109.



The third inversion,

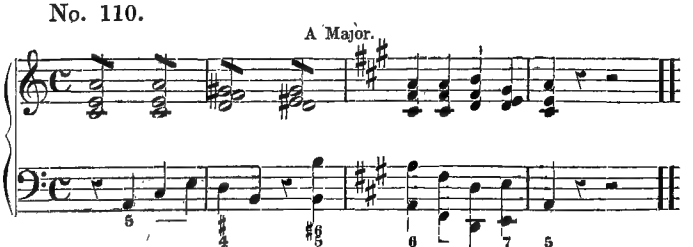


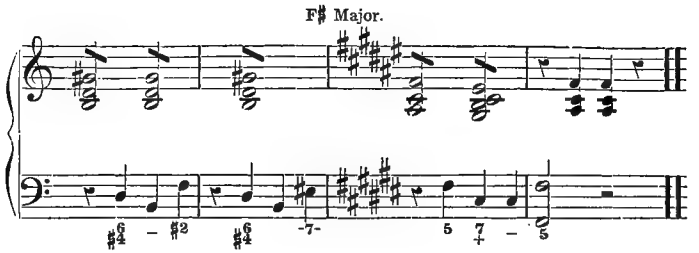
is enharmonically



by which we get the way open to *f♯*, minor or major, or to the major parallel key, *a♯* major.

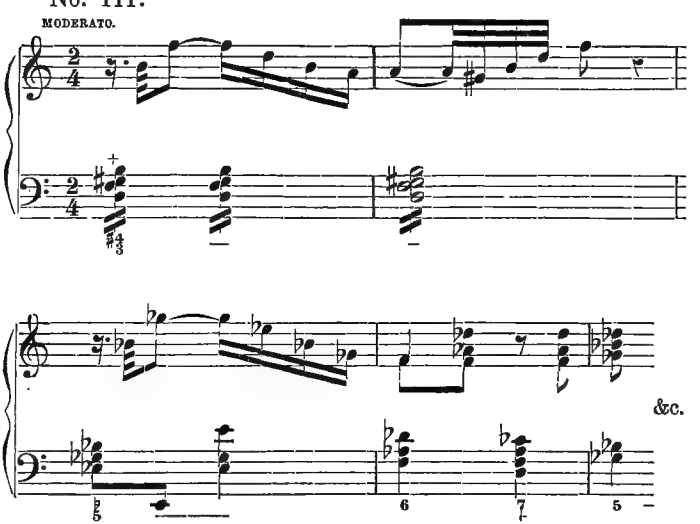
No. 110.





It is not always necessary to realize the enharmonic change. The composer very often understands it, and reaches directly the modulation in view; but then it is necessary to give the seventh a certain length, especially in the quick motions, that the hearer may comprehend the modulation; as,

No. 111.

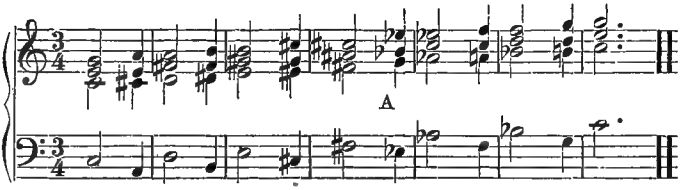


Here (at +) the *d*, *f*, *g*♯, *b*, is supposed to be *d*, *f*, *a*♭, *c*♭, and the composer realizes immediately the transition from *a* minor into *e*♭ minor. He goes still farther, and closes with the major key, *g*♭.

The object of enharmonic changes is sometimes to avoid keys

encumbered with accidentals. This is particularly the case in passages, or sequences; as,

No. 112.



At the fourth measure, the dominant triad ought to have been followed by the chord, *g*♯ major, with eight sharps, which would have involved us in an infinity of signatures. Instead of this, we have enharmonically changed the above chord, *d*♯ (at A) into *e*♭, *g*, *b*♭, which has brought us into keys with less signatures.

Sometimes, however, the enharmonic changes increase the number of signatures, as in Nos. 109, 110. In general, the enharmonic modulations must carry a meaning with them. If the composer wishes to give his work a more lively character, the keys with sharps may assist him in carrying out such a design. Flats produce an opposite effect, by imparting a gloomy tint to the harmony. Let us now pass to

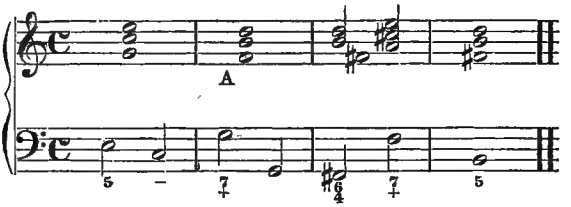
B. The Dominant Seventh.

In the synoptical table (previously given) of the enharmonic changes, we have seen that the extended sixth becomes a minor seventh. On the other hand, we have been informed, on page 73, that the extended sixth carries with itself a major third and a perfect fifth—just the same intervals which constitute the dominant seventh; wherefore, the change of the dominant seventh into the extended sixth, comes in quite naturally. Of course, when thus changed, the dominant seventh follows the rules already laid down (pp. 73 and 74) concerning this sixth. This again affords us many interesting modulations, if we consider that, besides the dominant seventh of the principal key, we may use those of the relative ones, and change them enharmonically.

In the following examples, the enharmonic note is suppressed, according to the directions given above, No. 111, on page 118.

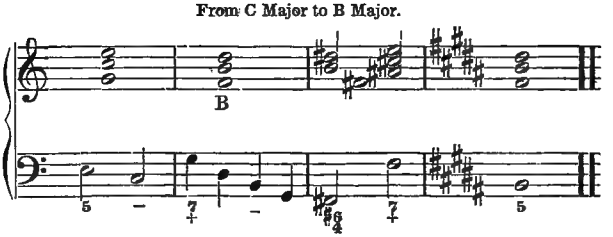
No. 113.

From C to B Minor.

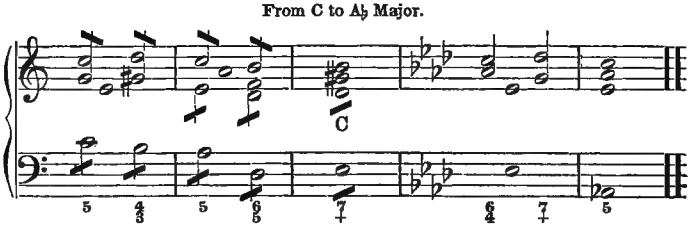


or

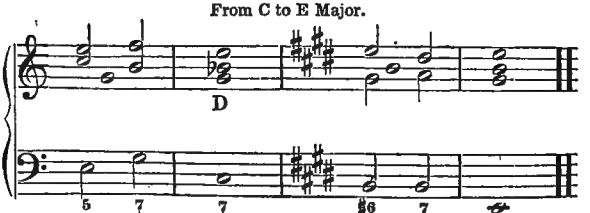
From C Major to B Major.



From C to A♭ Major.



From C to E Major.



At A, the dominant seventh represents the extended sixth, *g*, *b*, *d*, *e*♯, which resolves into the perfect cadence of minor *b*.

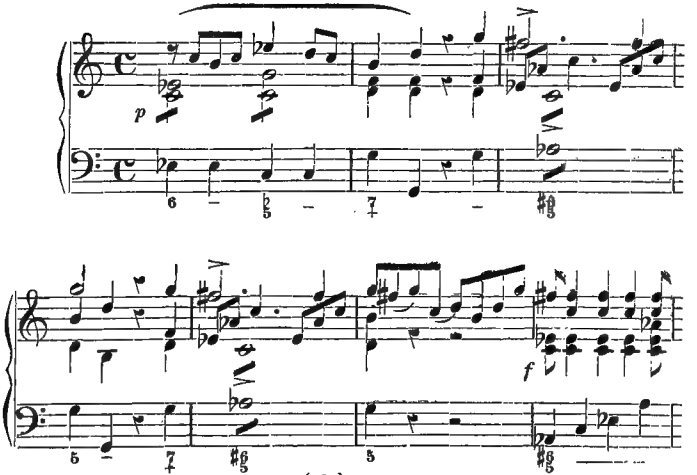
At B, the same change has taken place, with this exception only, that the extended sixth (minor seventh) resolves into the perfect cadence of *b* major.

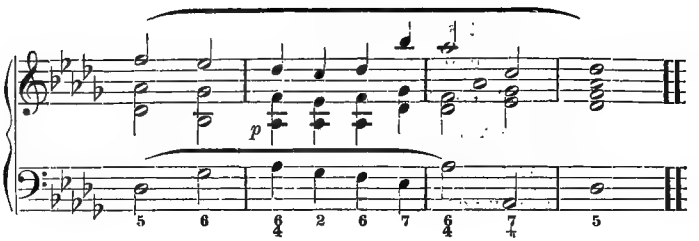
At C, the harmony goes to the relative key, *a* minor, of which the dominant seventh changes enharmonically into the extended sixth, *f*♭, *a*♭, *c*♭, *d*, which, at the fourth measure, changes into *e*♭, *a*♭, *c*, followed by the dominant seventh of *a*♭ minor.

At D, the harmony turns to *f* major, which, changed enharmonically its dominant seventh, closes with the major key, *e* major, with four sharps.

Now, since the dominant seventh can be changed into an extended sixth, it follows that the latter also is capable of becoming, in its turn, a dominant seventh. In this case, the sixth degree of the preceding key becomes the dominant of the following:

No. 114.



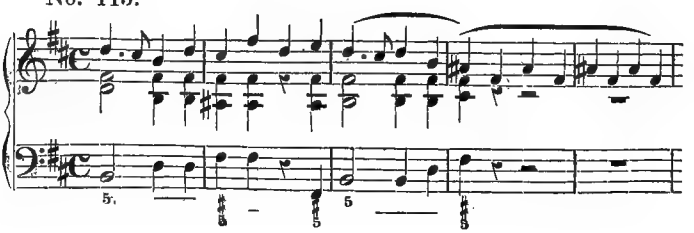


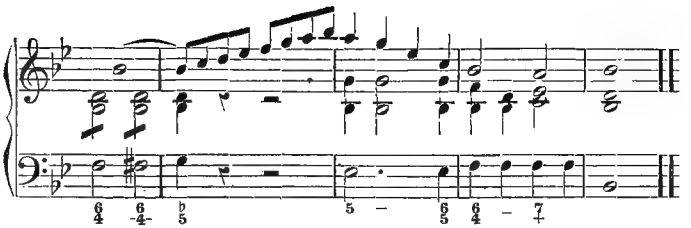
At the seventh measure, the extended sixth, after being heard in the preceding measure, in its regular treatment, changes enharmonically, and brings suddenly the harmony into the key of *d♭* major. This, when properly done, is susceptible of producing a very good effect. These few examples are enough to give an exact and sufficient notion of the above chords, so far as they may be used in performing enharmonic modulations. They are capable of producing a great variety of effective modulations, in the hands of an able musician. We need not dwell any longer on this subject, and we shall now touch what may be called

C. Arbitrary Enharmonic Modulations.

We call so such modulations as are not performed by the two preceding chords, but merely depend on any other chord, or even on any sharp or flat note which may present itself to the composer, so as to enable him to carry out an enharmonic change. Frequently, he takes this note, makes it stationary a certain length of time, and then changes it, according to his fancy. Cadences and half-cadences afford the best opportunities to accomplish such modulations.

No. 115.

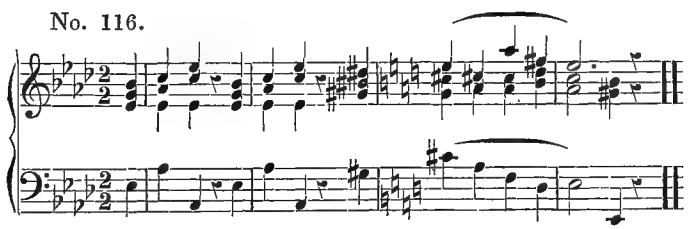




The first period of this example closes with a half-cadence. The first part, of the remaining on *a*♯, finally gives it up for *b*♭; and, at the same time, the whole mass enters upon the chord, *b*♭, *d*, *f*♮.

Sometimes the whole chord is transposed into its corresponding enharmonic; as,

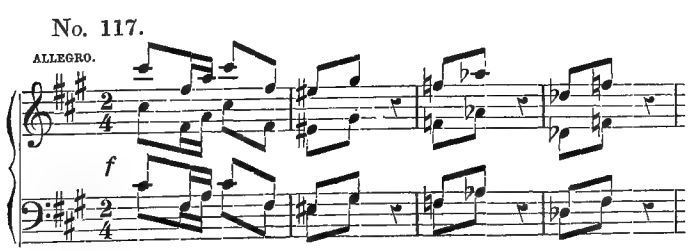
No. 116.

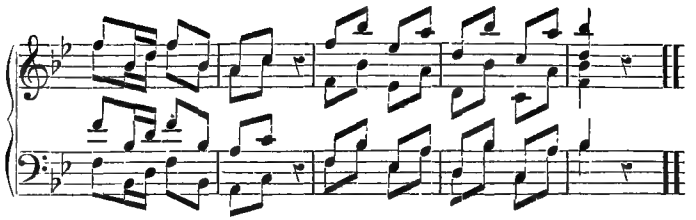


At the end of the second measure, the three tones of the chord, *a*♭, *c*, *e*♭, take their corresponding enharmonics; that is, the chord, *a*♭, *c*, *e*♭, becomes *g*♯, *b*♯, *d*♯, the dominant triad of *c*♯; after which, the harmony gets into the key of major *a*.

Unisons may, in many instances, afford effective means of operating enharmonic changes. The composer, in such occurrences, giving up all concern about harmony, takes hold of some melodic design, and develops it with the enharmony, in full vocal or orchestral blast. Example:

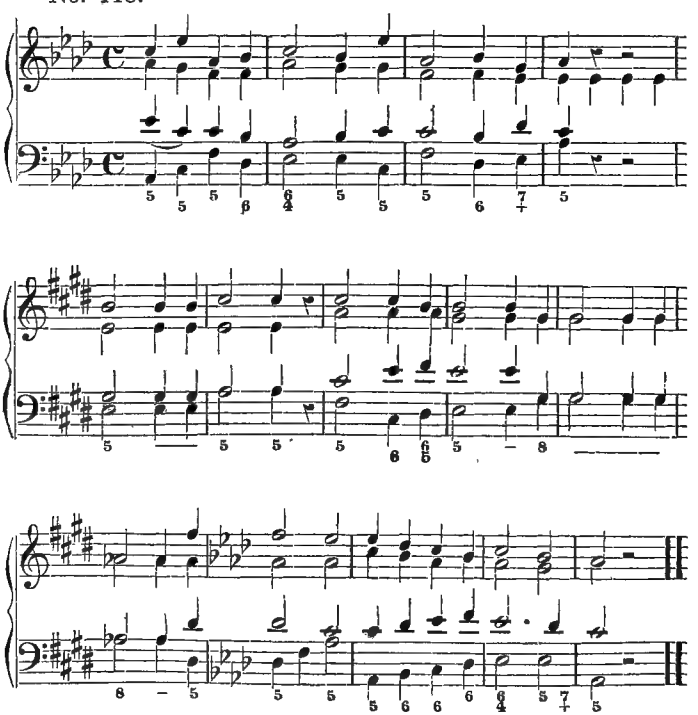
No. 117.





We have stated, on page 99, that after a final cadence, or even after a repose on any tonic, we can take this tonic as the major third of a new tonic; that is, modulate a major third below the preceding key. This modulation may sometimes require the corresponding enharmonic, in order to avoid an encumbrance of signatures, or to impart more variety to the composition. Example:

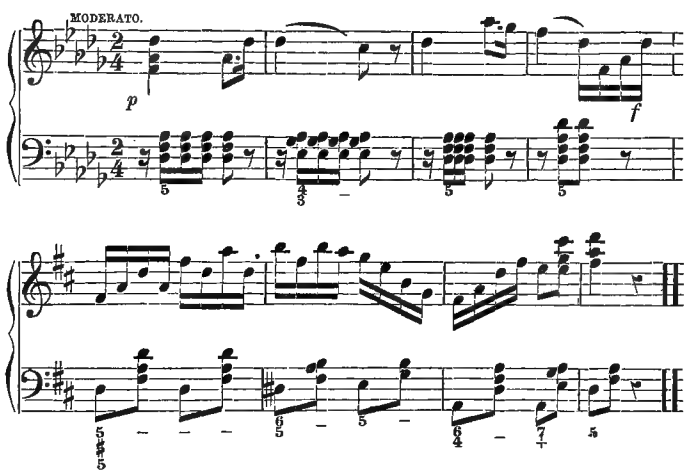
No. 118.



As it results from this example, enharmony may lead us back to the preceding tonic again. This is effected here by changing (ninth and tenth measures) *g♯*, of the tonic, *e*, into *a♭*.

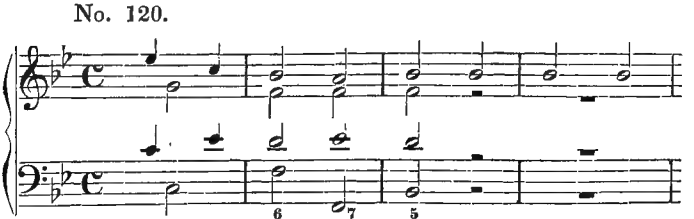
It happens very often that a flat-tonic is enharmonically considered, and mentally changed into its corresponding sharp one, which really becomes the leading tone of the tonic, a half step higher. For instance, from *a♭* tonic (being mentally changed into *g♯*) we can immediately go into major *a♮* (three sharps), from *d♭* major to *d♮* (two sharps), and-so-forth. An example will illustrate the subject.

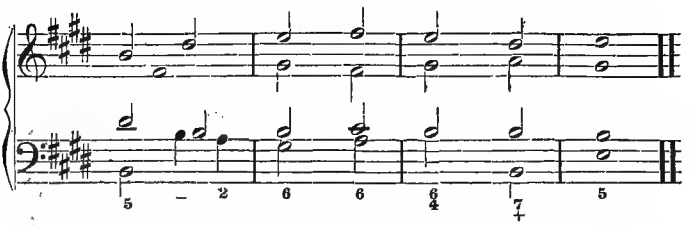
No. 119.



This does very well in instrumental compositions. In a vocal piece it would be proper to keep the tonic stationary, which, enharmonically, becomes a sort of leading note; thus:

No. 120.

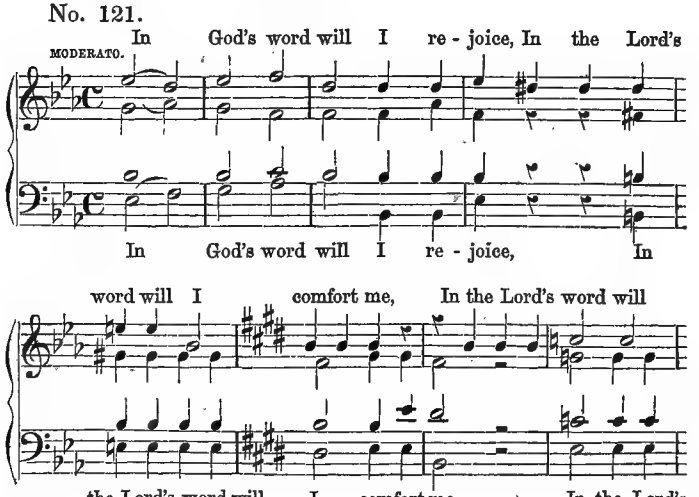




Here, the three tones, *b♭*, next to the third measure, are really the leading tone of the following key, *b*. In such occurrences, the singer who has to perform such a part as that of the treble here, never fails to sing these three tones as *a♯*; and then the partners of the treble *mentally* fill up the chord, counting the tone of the treble as the third of the dominant triad of *b♮* major; the whole party doing so, that they may not mistake the pitch of their respective parts. In the execution of enharmonic passages, good singers realize in their singing the tone intended by the composer.

The same modulation can be carried out in two other different ways. First, the flat tonic may be made the third of a dominant; second, the fundamental of a diminished seventh. But in both cases we obtain the same tonic as in the two foregoing examples. The following will give an illustration of both cases:

No. 121.



I comfort me, In God's word will

word will I comfort me, In God's word will

I re - joice, In the Lord's word will I com-fort

I re - joice, In the Lord's word will I com-fort

me, In the Lord's word will I com-fort me.

me, In the Lord's word will I com-fort me.

At the fourth measure of this example, the tonic, *e♭*, becomes the third of the dominant triad, *b♮*, *d♯*, *f♯*, and the harmony passes from *e♭* to *e♮*. The current of chords leads back again to *e♭*, from which it turns to *a♭*. This tonic (thirteenth measure) changes into *g♯*, the fundamental of the diminished seventh, *g♯*, *b♮*, *d*, *f*, which brings the harmony from *a♭* to *a* minor. Finally, all the parts verge to *e♭*, and get the final cadence in the principal key.

The foregoing remarks, with the examples, have unfolded the whole matter of enharmonic modulations. For the practical use of them, we refer the student to the works of the great writers.

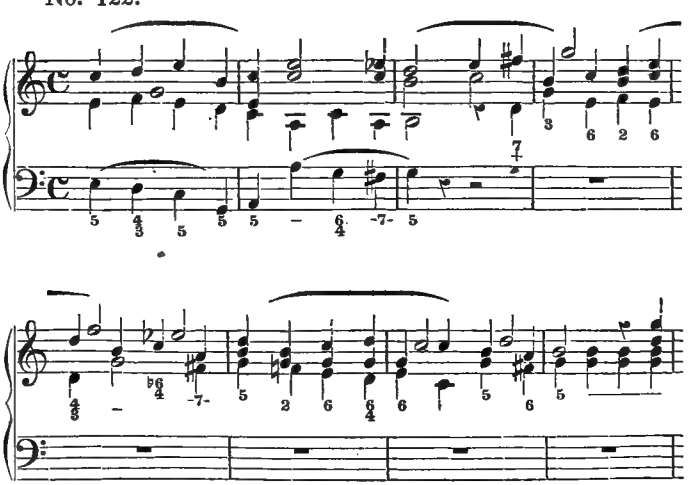
They will give him more information on the subject, and modulations in general, than heaped piles of volumes on harmony.

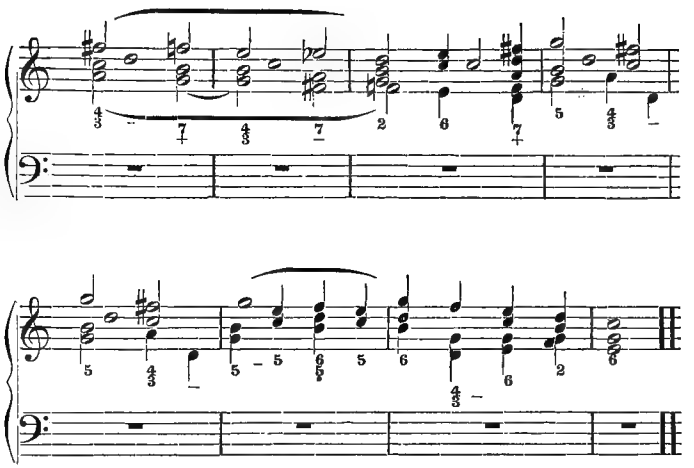
The Pedal-Point.

On pages 217 and 218 of our author, the origin and object of the Pedal-point have been fully unfolded. It remains now to say by what proceeding we can procure a pedal-point. The proceeding is this: the harmony above the sustained tone should be considered as an independent whole. Viewed thus, it must have a regular base as if it were to be performed without the assisting pedal. This is required, because the parts above contrast by their motion to the stillness of the immovable tone below.

Now, from what source shall the chords be drawn? From those keys that are nearest related to the pedal, avoiding those in which, if used, the common tone would have to be altered, either by elevation or depression. Usually, the sustained tone is the fundamental of the first and last chord of the harmony. The following is a sample of a pedal-construction:

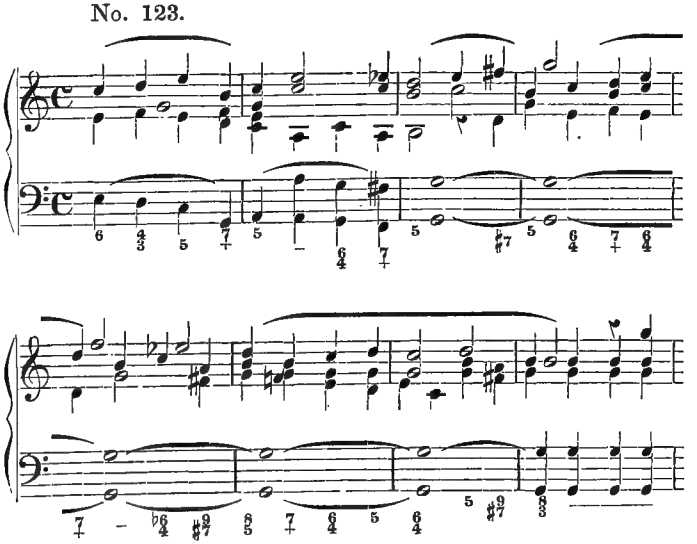
No. 122.

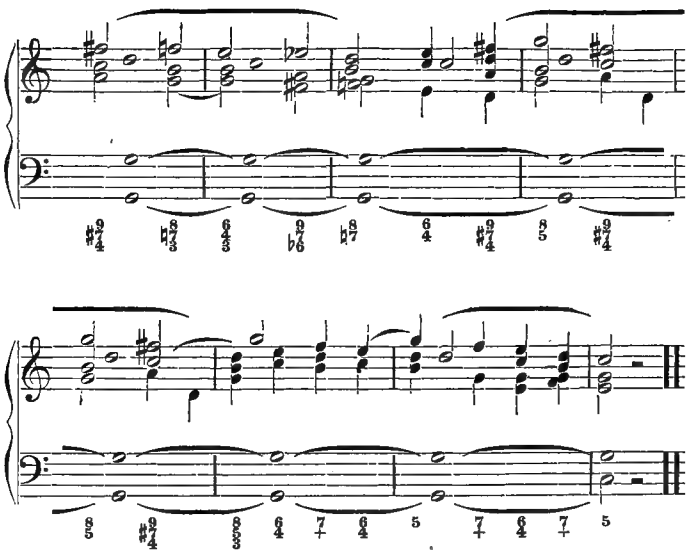




We find here all the requisites of a correct harmony, the tenor fulfilling the part of the base. Now, the pedal-point will add to the voice building a still stronger link and support.

No. 123.



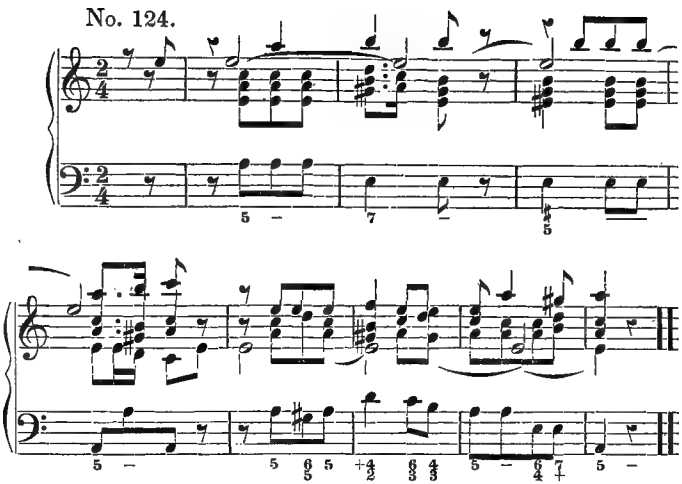


The pedal may also be properly placed on the tonic, and submits to the same rules which have been just laid down for that of the dominant. Enough has been said on this subject to require no further explanation.

Let us now come to another kind of sustained tone, which is called the *inward* or *middle pedal.* It ought to be, with few exceptions, an essential part of the chords, which is not the case with the outer pedal. The reason of this is obvious. In the latter, the remoteness of the sustained tone mitigates the harshness of the tones foreign to the pedal; but in the former, the discords dash closely against each other, and nothing indemnifies us for these unpleasant intervals; so, they must be avoided, unless they are intended to express a design of the composer; and even in such a case, they must be removed as far as possible from the sustaining tone, and buried in the centre of the parts.

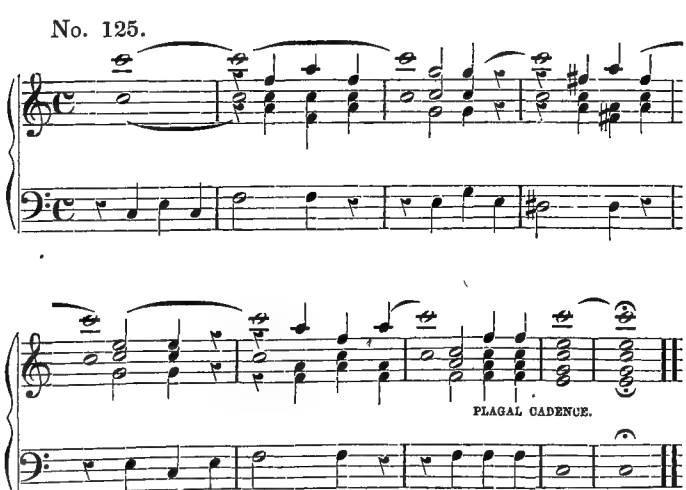
The inward pedal commonly stands upon the dominant; as,

No. 124.



In the following, we make the inward pedal partake of the chords from the very beginning to the conclusion, by which we have afforded to the pupil an instance of what is called a *plagal cadence*, which is laid on the subdominant, while the perfect cadence is placed on the dominant.

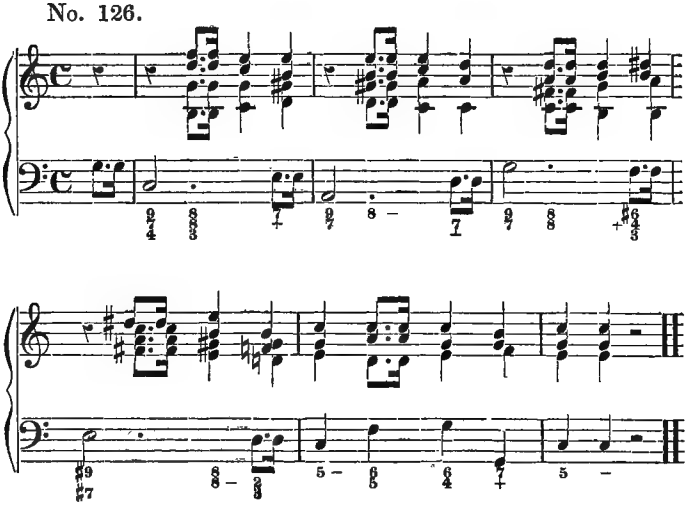
No. 125.



At the seventh measure of No. 125, the harmony leads from the subdominant to the tonic, contrary to the perfect cadence, of which the conclusion is from the dominant to the tonic. We call the attention of the student to this kind of cadence, which is used by the most able writers, and is sometimes most successful and effective.

Sometimes, the pedal point consists of a single note. In such an occurrence, every step of the base leads to a new tonic or dominant, which becomes the basis of a pedal point. It may serve, then, to develop a harmonic design; as,

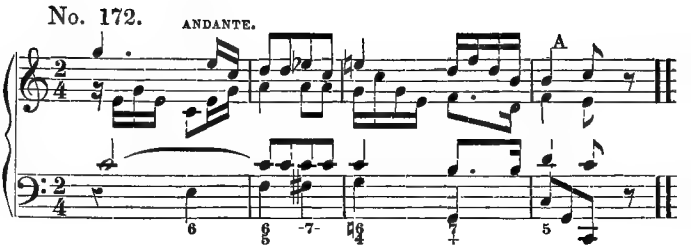
No. 126.



We have said that the inward pedal is placed on the dominant. Nos. 306 and 308 of our author, in consequence of the signature, seem to have the sustained tone upon the tonic. But the *b♭* in No. 316, and *f♯* in 318, change these tonics into real dominants, in spite of their ending upon the tonic.

There is a conclusion of the final cadence very common among composers, which must be referred to the pedal-point on the tonic. Here it is (at A):

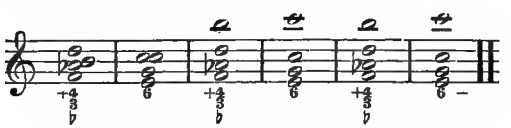
No. 172.



This is nothing else than the dominant seventh stretching over to the tonic. Such a cadence is commonly made use of in the *Andante* and *Andantino,* but seldom in the *Allegro,* and the like motions.

APPENDIX H.

THIS treatment of the diminished seventh is too loose, altogether. The *f* (former seventh in the nonachord) should meet *e* a step below. In the middle parts, it is sometimes made to ascend a step; but when in the base, it must be resolved regularly. May be, that such a resolution as given here by the author, occurs in the works of good composers; but this is a negligence which must be removed from books calculated for musical instruction. The student ought to be taught according to the rules of the severest discipline, which he must never be allowed to break, before he is acknowledged to have mastered the highest difficulties of the counterpoint. No. 292, at *c*, *d*, *e*, we would prefer to read thus:



APPENDIX I.

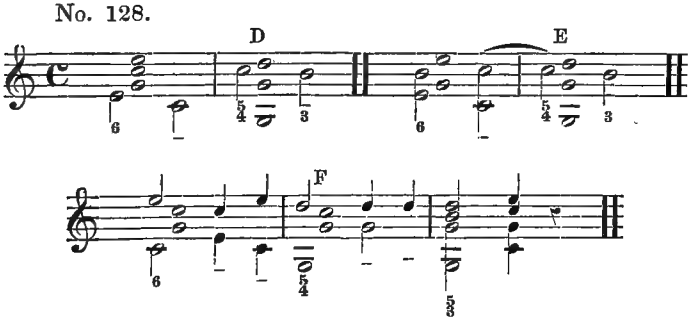
SUSPENSION is subject to the following conditions:

FIRST.—It must be prepared; *i. e.*, the dissonant tone must exist in the preceding chord, and must be given to the same voice or instrument which forms the suspension.

SECOND.—It must be resolved; *i. e.*, the discrepancy between it and the chord to which it stretches must cease, and the suspending voice or instrument finally enter upon the proper tone of the chord.

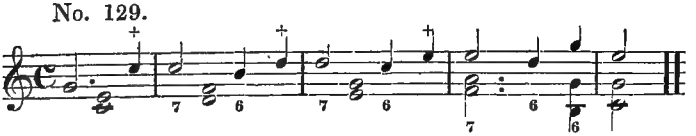
THIRD.—The preparatory tone can be longer, but never shorter than the suspension tone. It may be, too, equal to it. The latter sometimes fills the whole measure. Accordingly, the following suspensions are equally good:

No. 128.



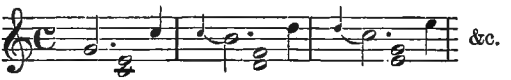
At D, the preparatory tone is longer than the suspension; at E, it is equal; at F, the suspension fills the whole measure, and all is right. But here,

No. 129.

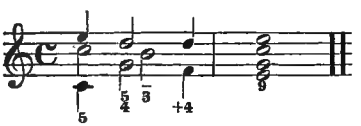


there is no suspension. The tones, *c*, *d*, *e*, (at the signs +) being shorter than the tones following them, the minims are merely appoggiatures, which are quite equivalent to this,

No. 130.



Fourth.—The preparatory tone may be placed either on the accented or unaccented part of the measure; but the suspension tone must fall on the accented one, and the resolution on the unaccented part. This is peculiar to suspensions. In this, also, they disagree with the chords of the seventh, in which the dissonant tone can be placed anywhere in the measure. Hence, the following suspension, and the like, is wrong,



in which the preparatory tone lies on the accented part, and the suspension falls on the second beat, and so escapes the accent.

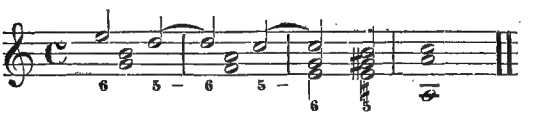
In the common double time, ₵, 2, and $\frac{2}{4}$, the first beat is accented, the second is not. In the quadruple time, the first and third beats are accented, the second and fourth not. In triple time, the first and second beats are often accented, the third is not. In the compound measures, the accents are distributed in the same way with the simple ones, in quick motions; but in slow movements, such as *Andante*, *Andantino*, *Grave*, *Adagio*, &c., the suspension can be placed on quavers. When there are four of them in a measure, as in $\frac{2}{4}$, the accents are divided, as they are in the common quadruple time; *i. e.*, the first and third are accented, the second and fourth are not. In compound, $\frac{3}{8}$, $\frac{6}{8}$, $\frac{9}{8}$, $\frac{12}{8}$, in which the ternary division of quavers takes place, the accents are distributed as in triple time; *i. e.*, the first and second quavers are accented, the third is not. What is said of the quavers applies, of course, to the crotchets in the compounds, such as $\frac{6}{4}$ and $\frac{9}{4}$; but they are less used than the former. Examples

of suspension in compound time will be given on pages, 150, 161, 162, 163.

FIFTH.—The suspension tone must form a dissonance with one of the tones of the suspension-chord.

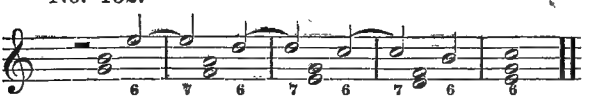
This is the sequel of the preparation and resolution, which imply necessarily a dissonance; for dissonances alone need preparation and resolution. Then, when there is not discord, there is not suspension. Hence, the following passage, in which there is not any discord, does not contain any suspension.

No. 131.



But the next:

No. 132.

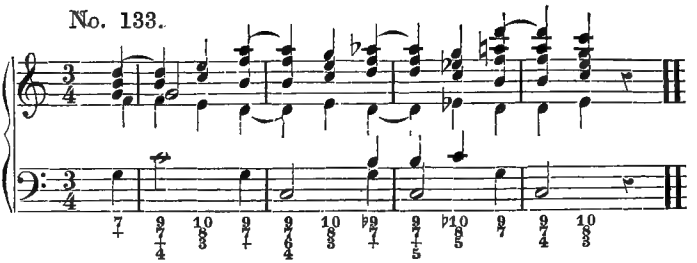


is an example of regular suspensions, and agrees with our directions; for suspension does not lie in the fact that a tone of a chord stretches over into another, to which it is not indigenous, but in the discord itself.*

The rigorous application of the principle of resolution, which is peculiar to dissonances, excludes forcibly such suspensions as resolve by an ascending step; *i. e.*, suspension from below. It may be replied, that there are instances of suspension resolving from below. There are indeed passages which, at the first sight, seem to contain such suspensions; but by referring them to the notions now familiar to us, it will be plain that they exclude real suspensions. The following is an instance of the kind:

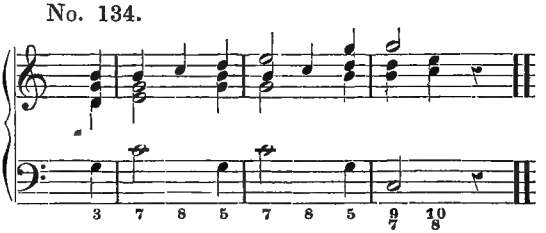
* Reicha's Treatise on Harmony.

No. 133.



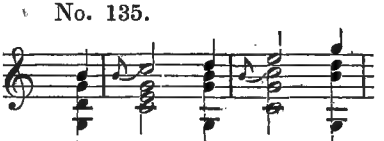
There is no suspension in this. At the beginning of the first, second, third, and fourth measures, we have a short tonic pedal formed by the dominant seventh and nonachord major and minor, following their usual way of resolutions above the sustaining tonic in the base. Here, again,

No. 134.



at the beginning of the first measure, no suspension can be found. *b* forms an appoggiature; so does the same tone at the beginning of the second measure, of the alto-part. As to the last, there is again a short tonic-pedal, with dominant triad. The above example could be changed, as follows:

No. 135.

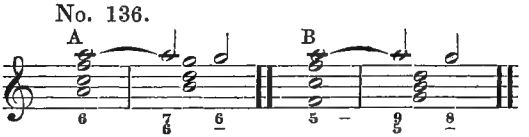


which represents exactly No. 134. When passages of ascending dissonances cannot be traced either to the pedal or to the appoggiatures, they are inexplicable. We should remark here, that the great masters, in the treatment of voices, have seldom indulged in

discords resolving from below. Handel has not a single example of suspension resolving from below. Mozart and Haydn have very few, if any. It is true, that in their quartets, quintets, and symphonies, such dissonances are found now and then; but all these instances can be referred either to the pedal-point, or to grace-notes. Moreover, instrumental music is a free kind of style, which admits of more liberty than the severe one which must now be the main object of the student.

Sixth.—When a tone of a chord is suspended, it can never be introduced simultaneously with the suspension tone, except when it forms a ninth with it, as when the fundamental is suspended in the upper parts. And, even when the retarded interval should have a necessary and determined stepping upwards or downwards, (such as the leading note in the dominant seventh, or the diminished triad and the seventh in all the chords of the seventh), it is never allowed to introduce, in any part whatever, the retarded interval simultaneously with the suspension tone.

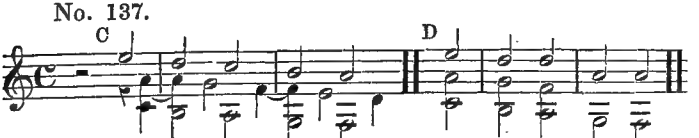
No. 136.



At A, the alto part (second measure) introduces the suspended tone simultaneously with the suspension-tone, so as to form an irregular and harsh interval. But at B, the suspended tone, though introduced simultaneously with the suspension, gives a regular interval of a ninth.

Seventh.—Suspensions are wrong when they fall on a faulty successions of fifths and octaves, for they neither correct nor mitigate such successions. Hence, the following harmony is objectionable:

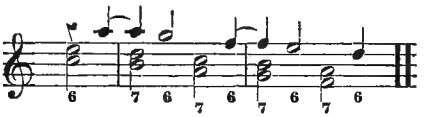
No. 137.



for there exists a succession of fifths between the tenor part and the

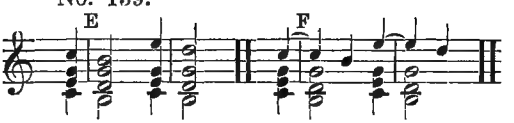
treble, which is apparently disguised by the suspension of the middle part at C; but if we leave out the suspensions, as in D, this succession of fifths shows itself naked to the eye. The harmony is not more admissible in the former case than in the latter. We will have it correct in the following:

No. 138.



Here also:

No. 139.



there is an example of wrong suspensions, as they arise from a succession of octaves, as it can be seen at E, which are still worse with the suspensions at F. We call the attention of the student to these preliminary directions, which, if observed, will enable him to avoid a great many mistakes in a matter which is of material importance. We now pass to

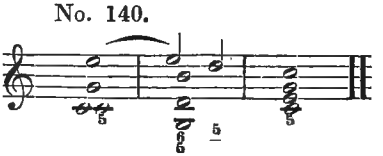
1. The Employment of the Suspensions in the Triads.

Thus far we know only what suspension is, and on what conditions it depends, having postponed its use till we became acquainted with its nature. Now we have to proceed farther, and to do so methodically, we shall use the suspension, first in the

§ 1. Uninverted Triad.

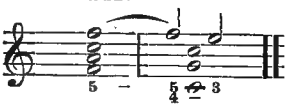
Every tone of a triad can be retarded by suspensions. With regard to the fifth, which when retarded gives no dissonance, but simply a chord of the sixth, we advise the pupil not to suspend it, unless the suspension tone be introduced simultaneously with that suspended at a distance of a ninth, thus:

No. 140.



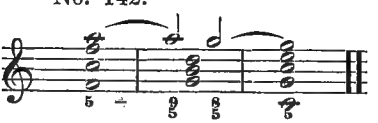
When the third is suspended, it gives a chord consisting of a perfect fourth and fifth, called $\frac{5}{4}$ $\frac{}{3}$:

No. 141.



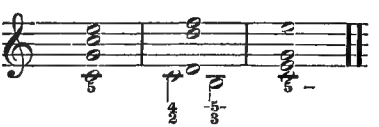
The fundamental can be suspended in two ways: by the upper parts, the base introducing the suspended fundamental simultaneously with the suspension tone, or by the base itself. In the first case it forms a chord consisting of a third, fifth, and ninth, called $\frac{9}{5}$ $\frac{8}{}$.

No. 142.



In the second case, it forms a chord consisting of a major second and perfect fourth, called $\frac{4}{2}$ = $\frac{5}{3}$, as:

No. 143.

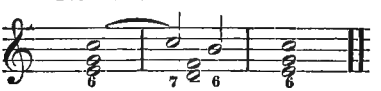


When the fundamental is suspended in one of the upper parts, it is rarely allowed to omit the third of the suspension chord.

§ 2. First Inversion of the Triad.

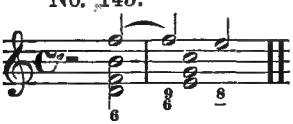
The suspension of the sixth gives a chord composed of the third and seventh, called $\frac{7}{3}$ – $\frac{6}{}$, as:

No. 144.



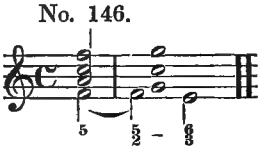
The third is not suspended in this inversion; for the suspension would introduce a $\frac{6}{4}$ chord instead of a real suspension. The tone-base may be suspended, either by the upper parts, or by the base itself, when in the upper parts, it gives a chord composed of a ninth and sixth, called $\frac{9}{6}\,\underline{8}$:

No. 145.



When the base-tone is retarded by the base itself, it forms a chord composed of a second and fifth, called $\frac{5}{2}\,\frac{6}{3}$:

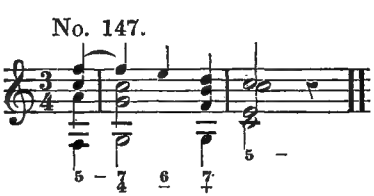
No. 146.



§ 3. Second Inversion of the Triad.

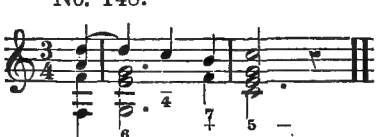
The suspension of the sixth in this inversion gives us a chord composed of a fourth and seventh, called $\frac{7}{4}\,\underline{6}$:

No. 147.



The suspension of the fourth forms a chord composed of a fifth and sixth called $\frac{6}{5}\,\bar{4}$:

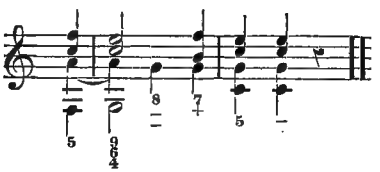
No. 148.



This suspension can take place only in cadences or half-cadences, in which the fourth does not need preparation. In the other cases the preparation of the fourth excludes any suspension whatever.

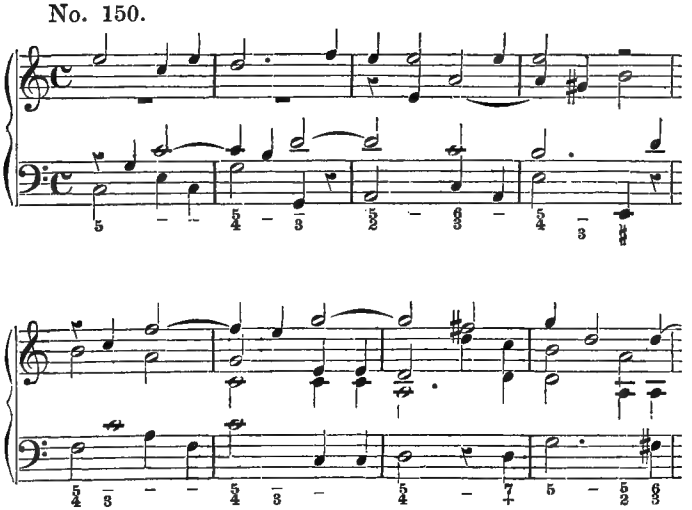
The base-tone here is retarded only in the upper parts. It forms a chord composed of a fourth, sixth, and ninth. It is called $\begin{smallmatrix}9\\6\\4\end{smallmatrix}\ \begin{smallmatrix}8\\-\\-\end{smallmatrix}$:

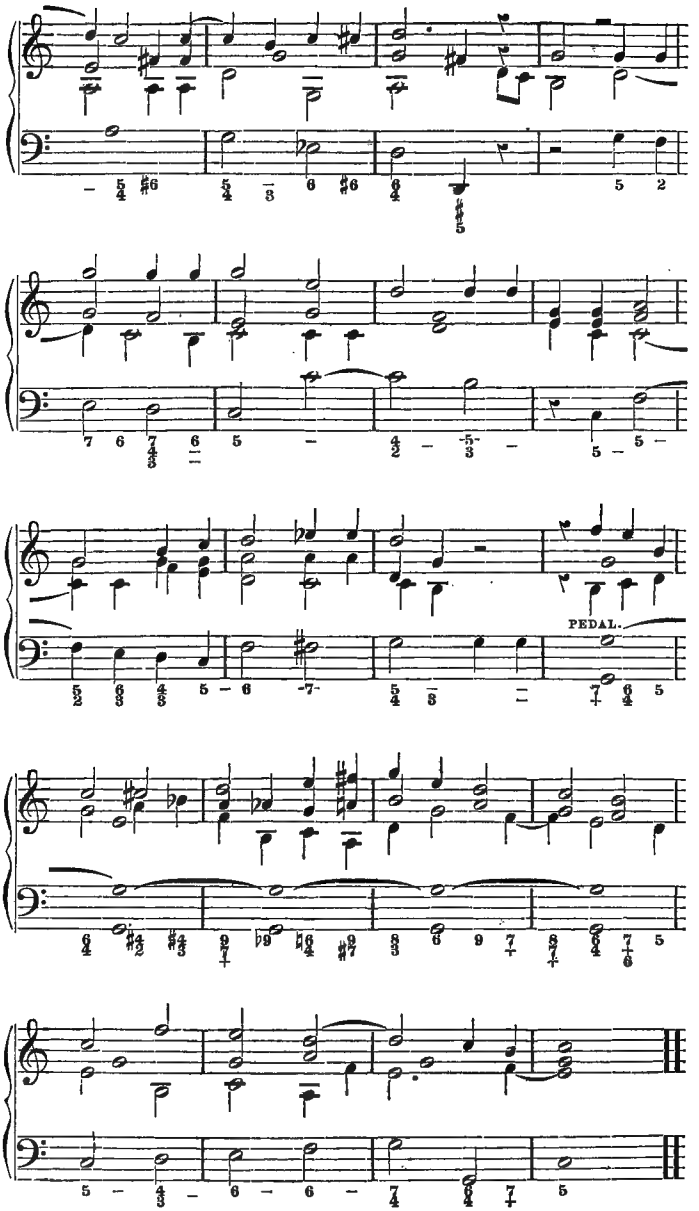
No. 149.



We shall now give some exercises on the employment of the suspensions in the triads and their inversions, that the student may, after them, exert his own industry.

No. 150.




PEDAL.

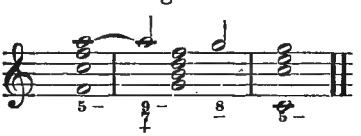
No. 151.

When reading over these exercises on suspensions, the student should trace every case of suspension to the directions already given, and ascertain to what particular direction each suspension belongs. He should also be certain, before ending his examina-

tion whether the suspension is used on the uninverted chord, or on an inversion. And what inversion? In No. 150 there is a pedal-point. He must look back at the rules of the pedal, and know whether these be rightly applied, and why? are there suspensions in this pedal? and where are they? All these previous searches will make his task of writing other exercises easier and more profitable for him.

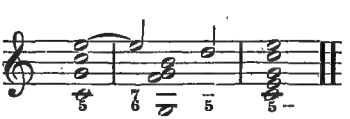
2. Suspensions in the Dissonant Chords.

The chord of this class, in which the suspensions are most usually used, is the dominant seventh. The fundamental tone is never retarded in the parts above the base; and the reason of it is, that such a suspension is nothing but the former nonachord



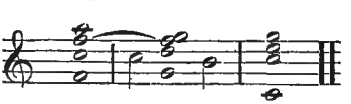
resolved to the seventh. But the suspension of the fundamental in the dominant seventh is sometimes used in the base itself, and this is a real suspension.

The suspension of the fifth gives a chord composed of a third, sixth, and seventh. It is called a $\frac{7}{6}$ chord.



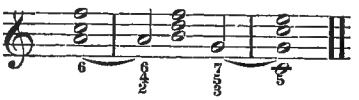
In the construction of this suspension, it is proper to remove the suspension tone from the seventh in order to avoid the close dissonances of *e*, *f*, *g*, as in the above example.

The suspension of the third gives a chord consisting of a fourth, fifth, and seventh, called $\frac{7}{4}$ chord:



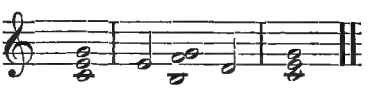
This suspension is the one most usually employed in the dominant seventh.

The suspension of the fundamental by the the base gives a chord composed of a second, fourth, and sixth, called $\frac{6}{4}$:

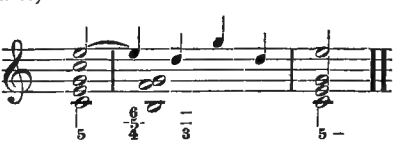


§ 1. First Inversion.

The first inversion of the dominant seventh consists of a third, diminished fifth, and sixth. Only two suspensions are possible in the first inversion of the dominant seventh, as the fundamental can not be suspended in the upper parts, for the reason assigned in the previous directions. The suspension of the third takes place here but seldom. Nevertheless, it can occur, but with the following cautions. The close dissonances *e*, *f*, *g*,

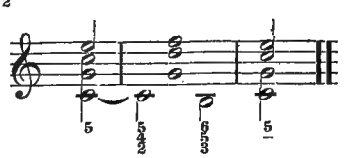


should be avoided; for, constructed as it is here, this suspension would be hardly bearable. But if we remove the suspension tone to the upper parts,



it becomes satisfactory, and even effective.

The supension of the fundamental tone, (the primitive third of the chord) by the base, gives a chord composed of a second, fourth, and fifth, called $\frac{5}{4}$:

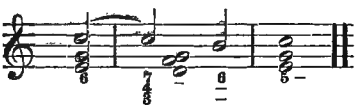


This suspension is more common than the foregoing, and more satisfactory to the ear. It does not require the same cautions

for the arrangement of its tones, as the dissonances lie at a distance from each other.

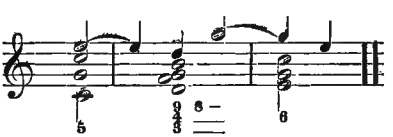
§ 2. Second Inversion.

This inversion is a $\frac{4}{3}$ chord with a major sixth. The suspension of the sixth is of very frequent use, and effective. It forms a chord consisting of a third, perfect fourth, and seventh, called $\frac{7}{4}$:



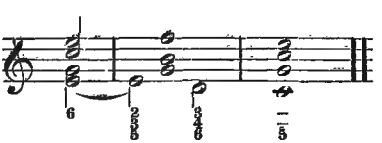
It is practicable, whatever may be the arrangement of the parts.

The suspension of the base-tone can only be done by the upper parts. It forms a chord of a third, perfect fourth, sixth, and ninth, called $\frac{9}{4}$:



For the arrangement of the parts, the directions given in § 1 must be attended to.

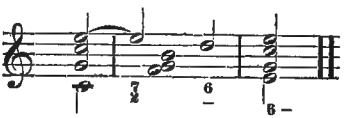
The suspension of the base-tone by the base itself, is very seldom, if ever, used. It would be thus:



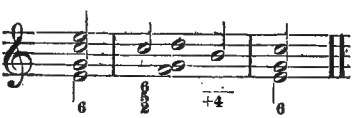
§ 3. Third Inversion.

This inversion consists of a second, augmented fourth, and major sixth. Two effective suspensions can be used in this inversion—the suspension of the sixth and of the augmented fourth.

The suspension of the sixth gives a chord consisting of a major second, augmented fourth, and seventh, called $\frac{7}{2}$:

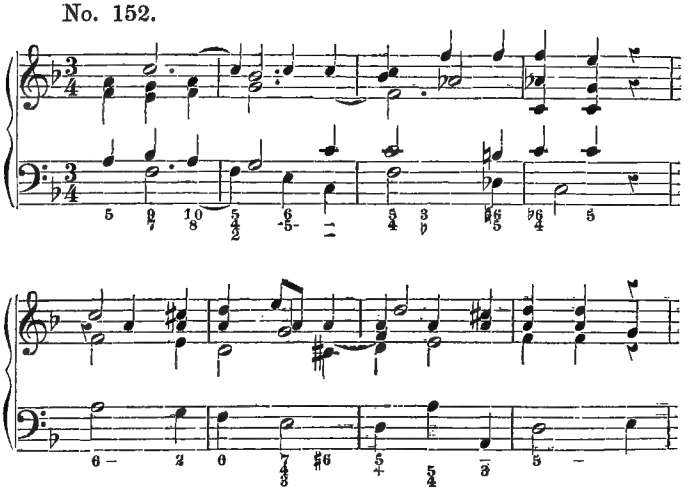


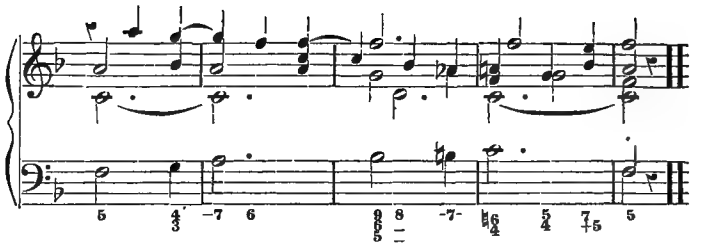
The suspension of the fourth gives a chord consisting of a second, fifth, and sixth, called $\frac{6}{5}$:



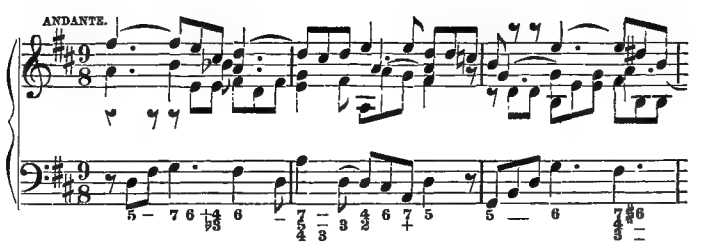
All the suspensions which can be formed in the dominant seventh can likewise be used in the other sevenths, with only this difference, that in the latter the fundamental can be retarded, both by the upper parts and by the base itself. So, we do not think it necessary to enter upon any particular explanation concerning these sevenths. All the foregoing directions are enough to enable the student to use the same suspensions (as above) in any seventh whatever. We will now give some exercises of the suspensions in the sevenths in general.

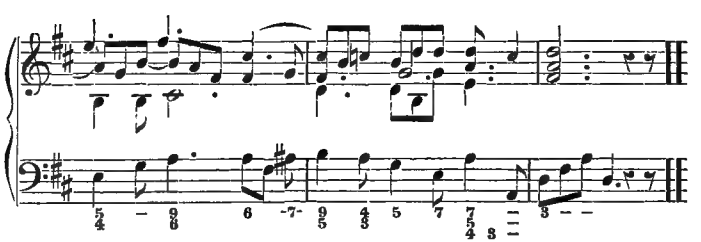
No. 152.



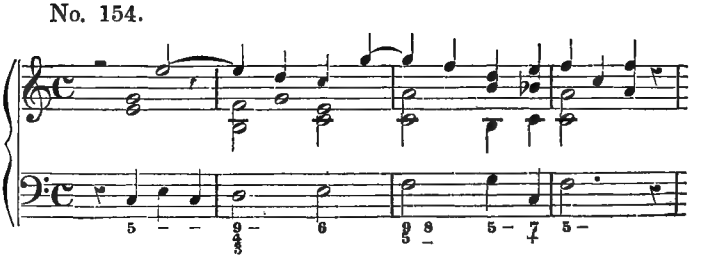


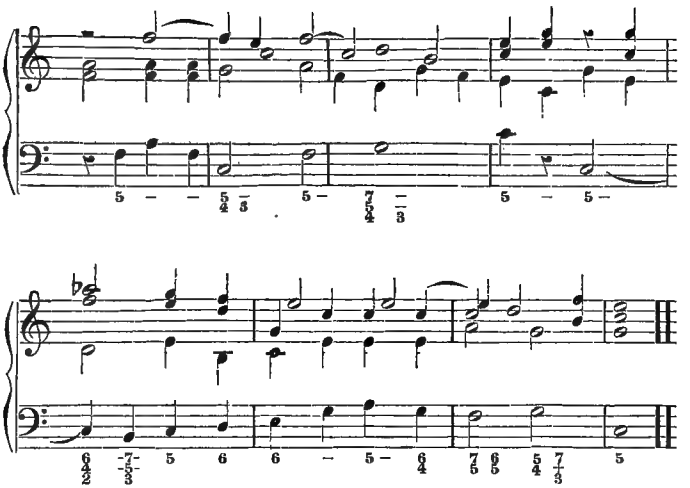
No. 153.





No. 154.

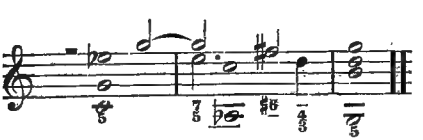




We refer the pupil to the remarks under No. 151, and exhort him to ascertain here the suspensions made in the sevenths and their inversions. We would induce him, also, before he reads the exercise No. 153, to look at the previous direction, No. 4th, on the compound time, (page 136.)

Suspensions in the diminished seventh are not very common, save that of the leading tone, the third of the dominant seventh, from which it is derived. There is an instance of it in the ninth measure of No. 154, above. This suspension can be used through all the inversions. Next to it, the fifth may be successfully suspended, if done with discernment.

In the extended sixth, the sixth only is apt to be suspended:

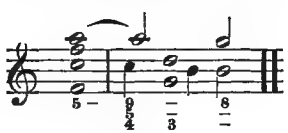


This suspension is very commonly found, and satisfactory; it is even more elegant to use that chord with the suspension.

3. Double Suspensions.

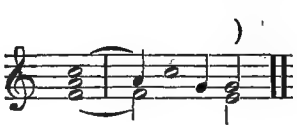
Thus far we have used our suspensions in only one part of our exercises. Now we will have them in two parts simultaneously, in other words, instead of one we will have two suspensions meeting together; but no more than two can be used at the same time. Of course, all the conditions required when a single suspension is used must be attended to, when two occur simultaneously. (Directions 1, 2, 3, 4, 5, 6,) Pages 135, 137, 138, 139.

As to the resolution, we must observe that the resolution of both suspensions ought not to be simultaneous; that that suspension must resolve first which introduces a new dissonance. Such is the opinion of Reicha, in his treatise on harmony.



This suspension presents itself to us with two different features. First, we discover two discords, *g*, *a*, a ninth, and *c*, *d*, a second. The second feature gives us likewise two discords, the same ninth, *g*, *a*; but the chord of the second vanishing gives us a new dissonance, viz: a seventh, *b*, *a*, with *a* in the treble.

The ninth alone, combined with another discord, can give room to double suspensions in the triads. In all the other instances there can be no double suspensions, because only one dissonance can be had. Here,

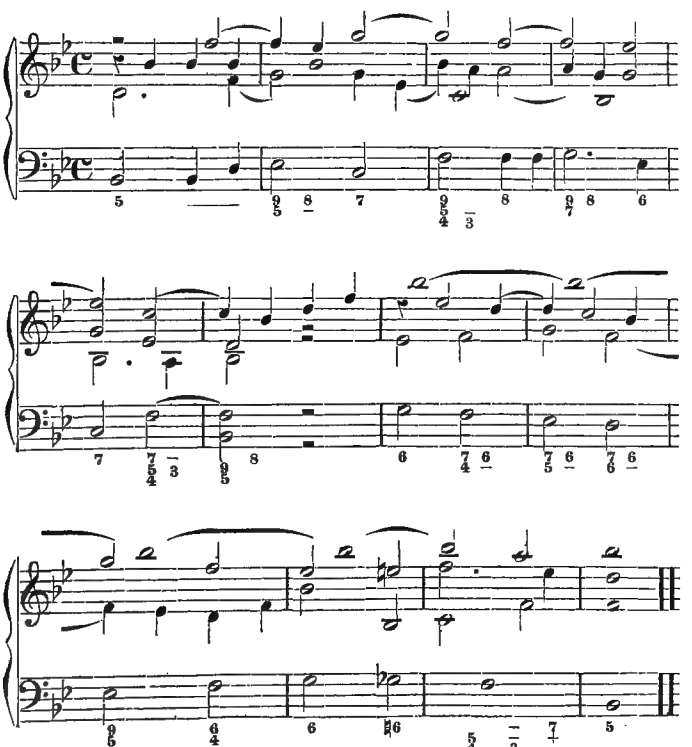


we have two tones stretching over from one chord to another. But the tone *a*, of the chord *f*, *a*, *c*, prolonged to the following *e*, *g*, *c*, continues only the whole chord *f*, *a*, *c*, on to the beginning of the second chord; and *g*, next to *a*, the intended suspension, instead of introducing a new chord by resolving *a*, is, by its shortness, rather an anticipation of the following sixth chord than a suspension tone

over the base. Nay, the stretching *a*, of the triad *f*, *a*, *c*, far from giving anything striking or new to the second triad, spoils the suspension of the sixth chord by the base. This shows that real suspensions are based on dissonances.

Double suspensions are more properly used in the chords of three tones, than in those of four, that is, in the triads than in the sevenths. With one suspension, a seventh has two dissonances, with a double suspension, it contains three dissonances. This is almost an over-burden of discords to the ear. For this reason, double suspensions must be used moderately.

No. 155. EXERCISES ON DOUBLE SUSPENSIONS.

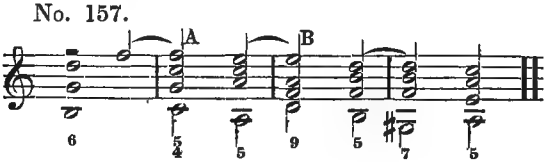


No. 156.

3. A New Feature of Resolution in the Suspensions.

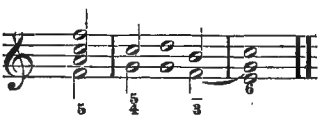
In our preceding exercises, the resolution of the suspensions takes place while the chord into which the suspension finds its way is still in existence. Now, we will have the resolution take place on a different chord. Thus, in the following:

No. 157.

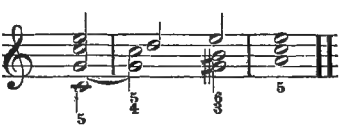


the *f* (at A) of the treble ought to resolve into *e* of the chord *c, e, g;*

and in the like manner should the *e* (at B) resolve into *d* of the chord *g*, *b*, *d*. Both tones pursue their prescribed course; but in the meantime the chords *c*, *e*, *g*, and *d*, *f*, *a*, have changed into *a*, *c*, *e*, and *b*, *d*, *f*; for it is sufficient that the resolution is effected in the proper tone. The chords do not influence it. Here, again,



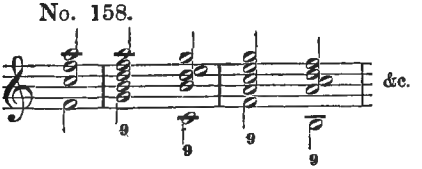
in the $\frac{5}{4}$, in which the third is retarded by the perfect fourth; the suspension had to resolve on the dominant triad; but the base, under the very same resolution-tone, changes into the third inversion of the dominant seventh. The same suspension ($\frac{5}{4}$),



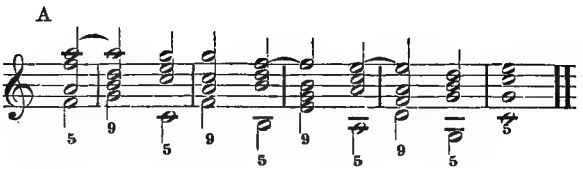
affords us a modulation into the parallel minor key. The resolution had to take place on *g*, *b*, *d*. But the base changes its course from the dominant triad of *c*, into the first inversion of the dominant triad of *a* minor.

This resolution of the suspension gives room to successions of ninths which are not practicable with the usual nonachords, on account of the number of their tones, which prevents us from using such passages as these:

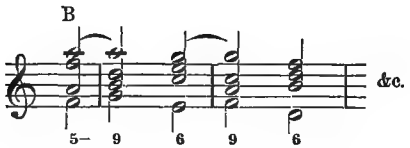
No. 158.



But with the supensions we can use the same succession, in which the ninth occurs stripped of the sevenths, and steps more freely.



or



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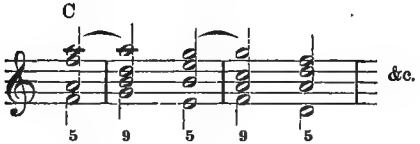
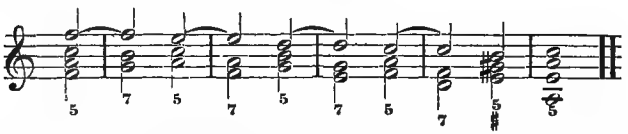
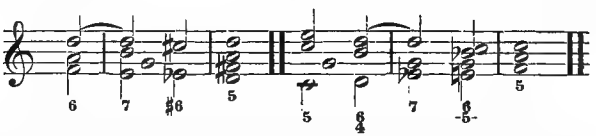


Here the resolution of the suspension was expected to take place on the sustaining-tone of the base, which introduces every measure. But by the progressing of the base, a fifth below at A, a third below at B, and again a third below, but with a different harmony, at C, the resolution is performed on different chords throughout.

By resolving the suspensions on a different chord, we can obtain the following succession of sevenths:



The resolution of the sevenths can also progress from major to minor or extended sixths; and from minor to major sixths, and *vice versa*, as:

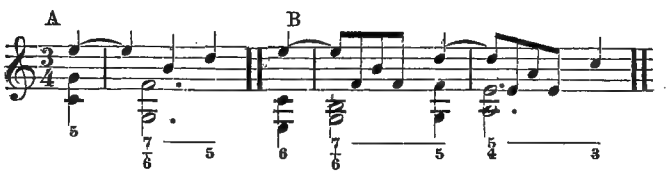


From the above examples, it results that the base can take its

way through every succession in which the resolution of the suspension meets with its proper tone.

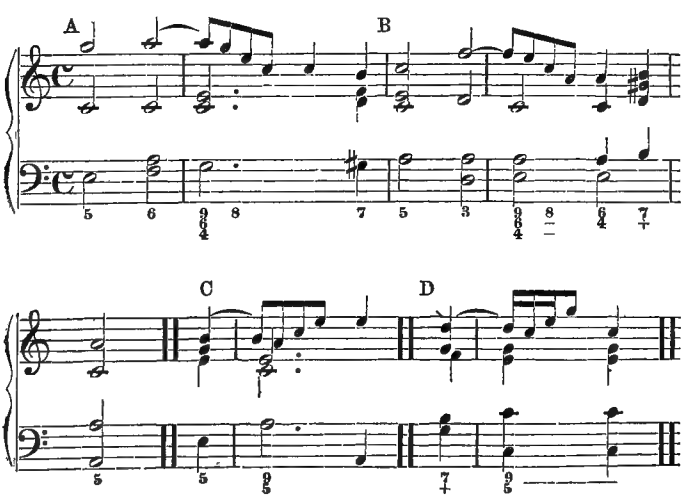
There are still some peculiarities which regard the resolution, and which should be noticed here.

Firstly, the suspension-tone can be permitted to pass through one or more chord-tones before obtaining its due, that is, the resolution can be postponed by placing, between the suspension and resolution, one or more chord-tones. Thus here:



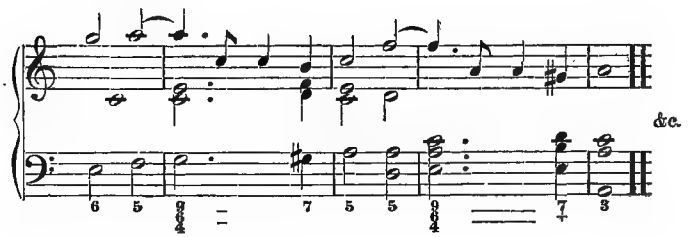
At A, the suspended *e* resolves correctly into *d*, but not before the third of the new chord finds its way between suspension and resolution. At B, we find even three tones between the suspension and its resolution.

Secondly, by a contrary course, the voice or part which contains the suspension can, immediately after the resolution, pass through several tones of the chord. Here, for instance,



The suspension of the treble at A, B, C, D, of the preceding example is correctly resolved into the next tone, but immediately after the resolution the voice passes through several tones of the chord. It may be proper sometimes to suppress the resolution-tone, and some other intermediate one, to avoid confusion arising from an encumbrance of chord-tones, as here:

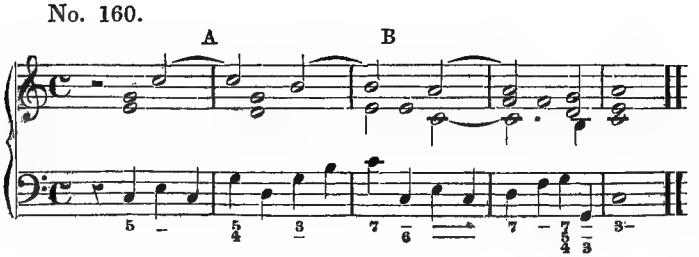
No. 159.



But, as a general thing, it is not correct to suppress the resolution, and we ought to avoid doing this as much as possible. As to the chord-tones, we are always allowed to cancel as many of them as we think proper.

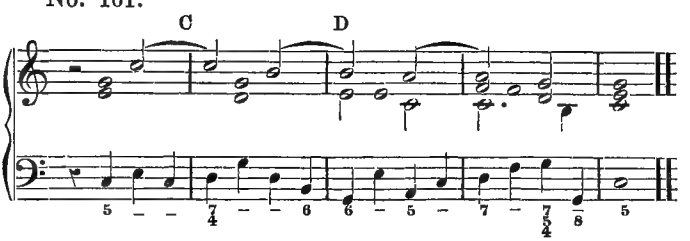
The base, also, is allowed to step from one tone to another. This is often necessary in order to preserve the certainty of time, which must never be left uncertain, especially in every suspension. But in doing so, we should take care lest we change the character of the suspension, and even destroy it.

No. 160.



We have here a 𝄴. The upper parts move with suspensions and slurs: in the meantime, the base, by its decided motion, marks strongly the movement; it preserves, too, the character of the suspension, which is $\frac{5}{4}$ at A, and $\frac{7}{\ }$ $\frac{6}{\ }$ at B. At A, the base, before passing through the chord-tones *d*, *g*, *b*, strikes *g*, the fundamental of $\frac{5}{4}$; at B, it strikes *c*, the fundamental of $\frac{7}{3}$ $\frac{6}{\ }$, before moving through the chord-tones, *c*, *e*, *c*. But now

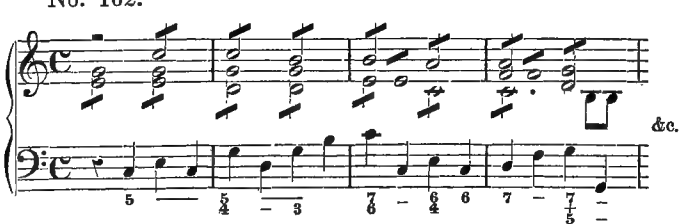
No. 161.



the character of the suspension is changed (at C) from the primitive $\frac{5}{4}$ –, into the $\frac{7}{4}$ $\frac{6}{\ }$ and (at D) the suspension is destroyed, according to the rule previously given, that the suspension consists in the dissonance.

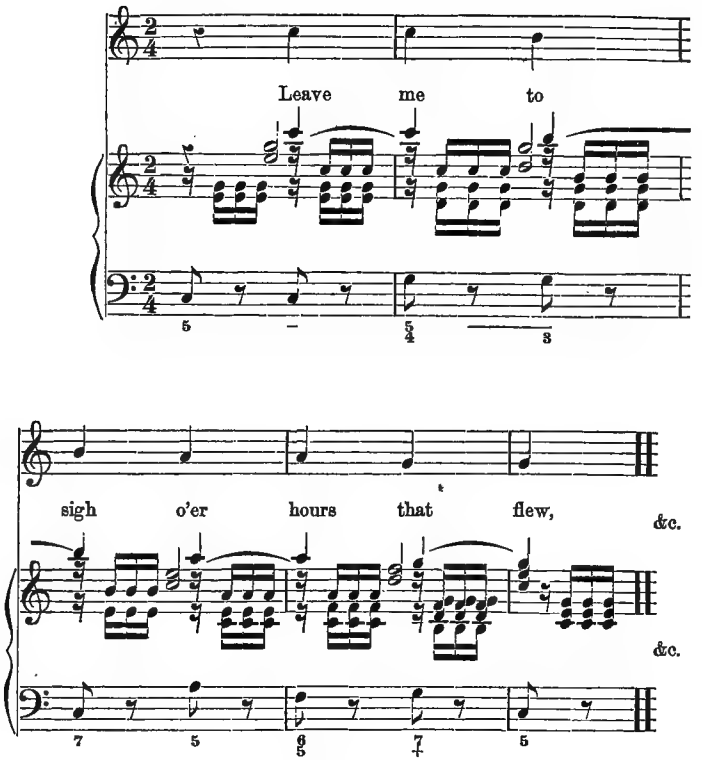
The slur, ⌒ is not essential to the suspension. In the above, for example, the slurred minims might be changed into quavers, thus:

No. 162.



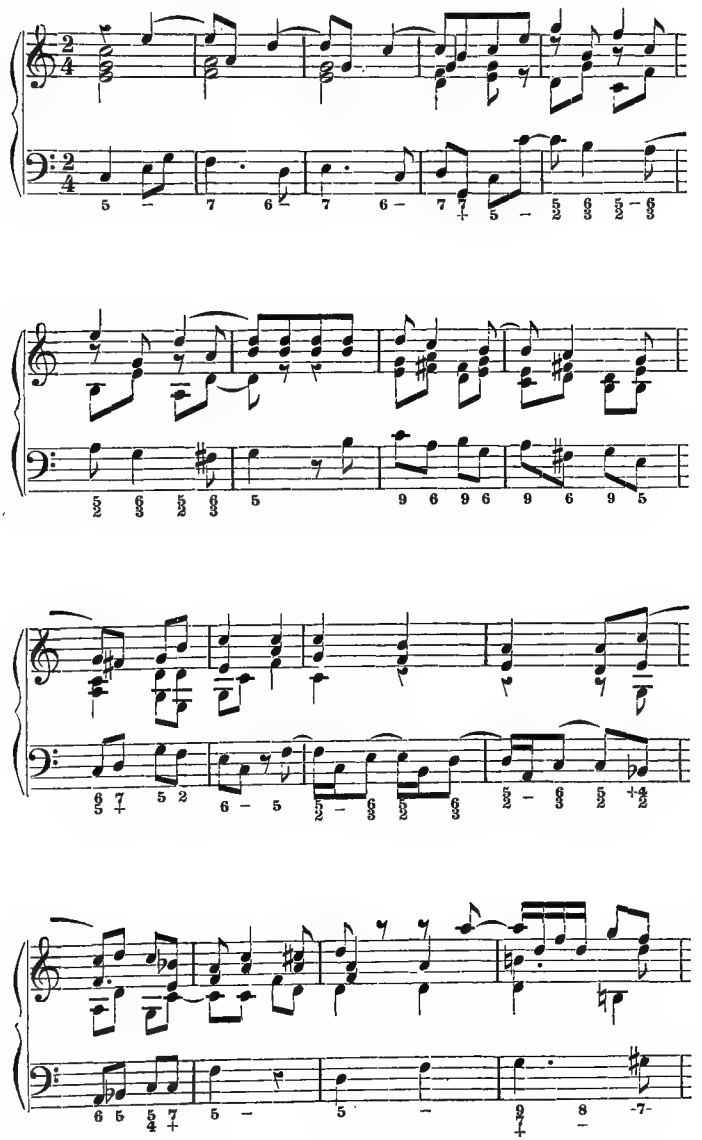
without destroying the suspension. It might likewise be modified so as to receive words, and yet preserve its character of suspension, as here:

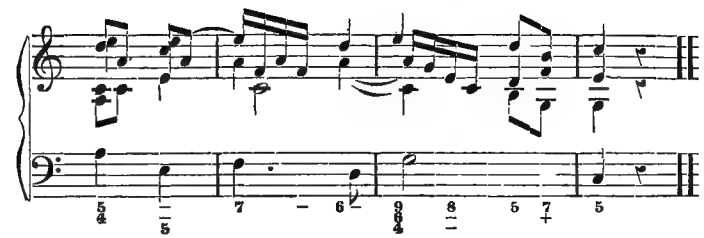
No. 163.



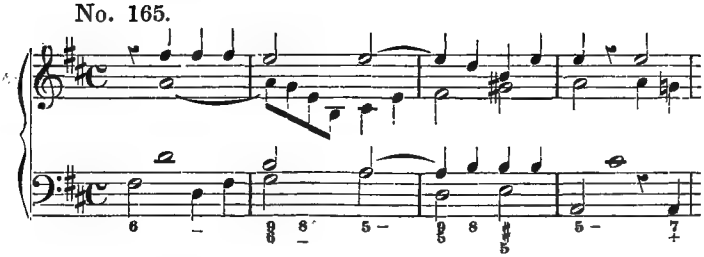
But in the last case, if there were an orchestra, some of the wind instrument parts would have to restore the suspension with the slur. This has a good effect. However different the No. 163 may be from No. 162, and the latter from No. 160, in all, the suspensions are equally maintained entire; and though, in the No. 163, the measure is changed, though the accompanying parts differ materially, still the suspension is as genuine in it as in the preceding ones. This serves to show the student that a musical idea can be developed and varied in its form, and yet remain the same, as to the harmony.

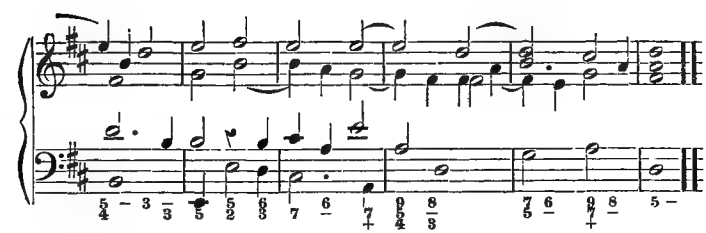
No. 164. EXERCISES ON SUSPENSIONS IN GENERAL.



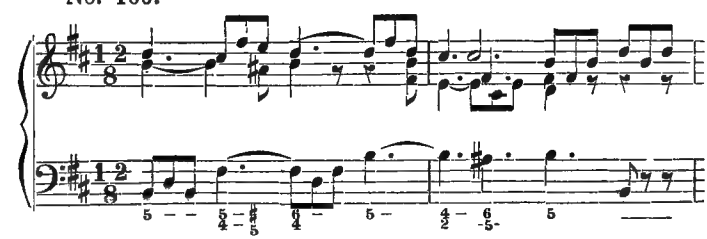


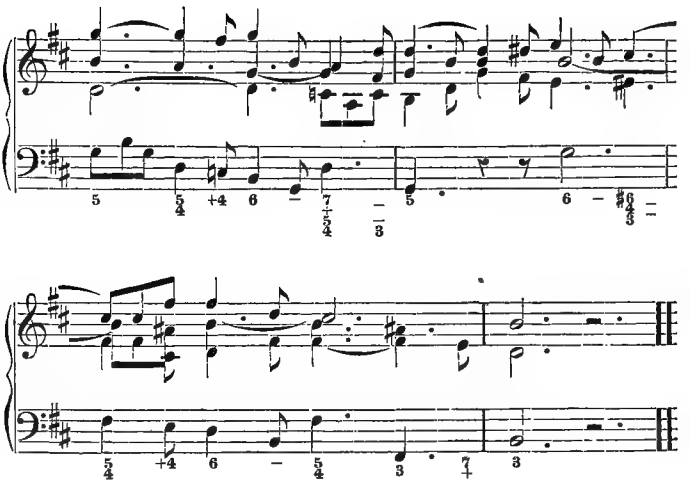
No. 165.





No. 166.

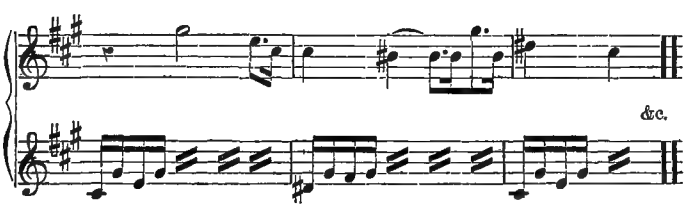




In the foregoing exercises on suspensions, particular attention has been paid, especially in compound measure, that each beat should be carefully marked and distinct; that when one or two parts stretch over from one beat to another, one or even two of the other parts move up or down to the sustaining tones. This proceeding renders the whole composition easier for the performers, and more intelligible to the hearers. We insist upon this point, because it is of the highest moment.

APPENDIX J.

No Suspension can be found in this Beethoven's fragment. The tone *c*♯, at the beginning of the second measure, and *d*♯, at the beginning of the third, do not form any suspension whatever. If a melody adorned with appoggiatures or grace-notes be reversed and sent to the base, the same ornaments still remain in the base, and preserve the same character. To make it plain, we will restore this melodic design to the treble part, from which it has been detached by Beethoven.



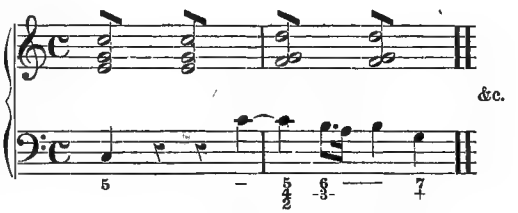
For the eye, as well as for the ear, it is impossible to discover any suspension.

The tones *c*♯ and *d*♯ form evidently an appoggiature, the one on *b*♯, the other on *c*♯. The figuring of this melody being the equivalent to this:

since the appoggiature takes its time from the note which immediately succeeds it. Now the melody does not undergo any alteration by being reversed, and being transposed from the treble to the base.

To show the difference which exists between a real suspension

in the base, and the fragment of Beethoven, above quoted, we will avail ourselves of a quotation from Mozart, in his opera, the *Nozze di Figaro*. Mozart introduces a duet between Suzanna and Figaro, in this manner:



What a difference between Beethoven's and Mozart's passage! It is impossible to mistake the suspension in the melodic design entrusted by Mozart to the part of the base. We find in it all the requisites of a suspension—preparation, resolution, &c.,—whereas, nothing such can be found in Beethoven's example quoted by our author.

If the student wish to study a beautiful specimen of suspensions in the base, arising from melodic designs, we refer him to the *Andante* introduction of Gluck's admirable overture to *Iphigenie en Aulide*, in which the great German master indulges in suspensions, passing from one part into another in a masterly manner.

APPENDIX K.

In his attempt to give an explanation of this quotation from Beethoven, our author falls into an evident mistake. The sustaining *e* is simply a pedal-point on the dominant of the tonic *a*. The part immediately above the pedal is, according to the principles of the pedal-framing, the regular base of the parts over it, though the sustaining tone discharges now and then the same office towards the upper parts. The tones of *a*, *f*♯, *b*, (beginning of the second measure) belong, here, to the seventh of the second degree of major *a*, whose fundamental, *b*, is placed on the tenor. This seventh resolves into the dominant triad, *e*, *g*♯, *b*. Accordingly, the tone *a*, which begins the second measure, and arising from the retained *a* of the preceding chords, does not form here any suspension; it is the seventh of the mentioned seventh. The only suspended tone, if any suspension is to be found in this Beethoven's fragment, is the *e* of the treble part. But this *e* cannot be a suspension, since it comes in suddenly without preparation, which is a fundamental law in matters of suspension. This *e* is a mere grace-note.